Massachusetts Edition

EPA United States Environmental Protection Agency New England

2002/Superfund Annual Report

A status report on the New England Superfund remedial, removal, brownfields, oil spill and emergency response programs.

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WELCOME TO EPA NEW ENGLAND

The New England office of the U.S. Environmental Protection Agency is dedicated to protecting the public's health and the region's environment. This report summarizes the extensive progress and activities accomplished during fiscal year 2002 by the Office of Site Remediation and Restoration. This program oversees the long-term and short-term cleanup programs, the Underground Storage Tank and Brownfields programs, and our Homeland Security efforts. We thank you for your interest in the New England cleanup programs and look forward to another year of working with our Congressional delegation, states and tribes, the public and others with an interest in our work.

EPA New England's Office of Site Remediation and Restoration (OSRR) oversees the Superfund program, including the long-term cleanups of National Priorities List (NPL) sites, short-term removal actions and emergency responses. This office also administers the region's Brownfields program, helps parties prepare for potential oil spills and works to prevent environmental disasters. It oversees the regulation of underground storage tanks and administers corrective actions where facilities must clean contamination and create better systems for managing environmental threats.

In the past year, OSRR has also shifted its priorities to better secure our national environmental resources. In the wake of September 11, this agency joined other federal agencies in an all-out push to be prepared in the event of another terrorist attack. This led to the new homeland security plan, involving all of EPA in coordination with other governmental and community organizations.

In addition, this office joins the entire agency in a focused federal effort to make sure all New England residents receive their share of environmental benefits. The federal government recognize the importance of environmental justice and seeks to provide equal protection for all of our communities, large and small, rich and poor. Because communities have not been treated equally in the past when it comes to protecting the environment, OSRR now considers environmental justice in all of its programs and decisions.

This report begins with a brief history of Superfund and a basic 'refresher course' on EPA's Superfund program. It continues with a section on financial investments made at toxic waste sites, including specific web addresses to find more comprehensive information for each site. A second report outlines the environmental success stories across New England in the Brownfields redevelopment program and the push to reuse once-toxic waste sites. There is also information on specific New England sites where EPA is doing short-term cleanups that leave neighborhoods safer until the properties are developed for a permanent new use.

At EPA, we are especially excited about the impacts our programs are having across the region in bringing many properties that once sat idle back into use, and look forward to continuing to work with our state and local partners and the congressional delegation to promote a cleaner, healthier, more productive environment.

Please visit EPA's Internet web pages to find a great deal of useful information as well as detailed descriptions of each of the 110 Superfund sites in New England. Bookmark the following web addresses: www.epa.gov/ne/superfund and www.epa.gov/ne/brownfields

Thank you for your interest,

Robert W. Varney
Regional Administrator

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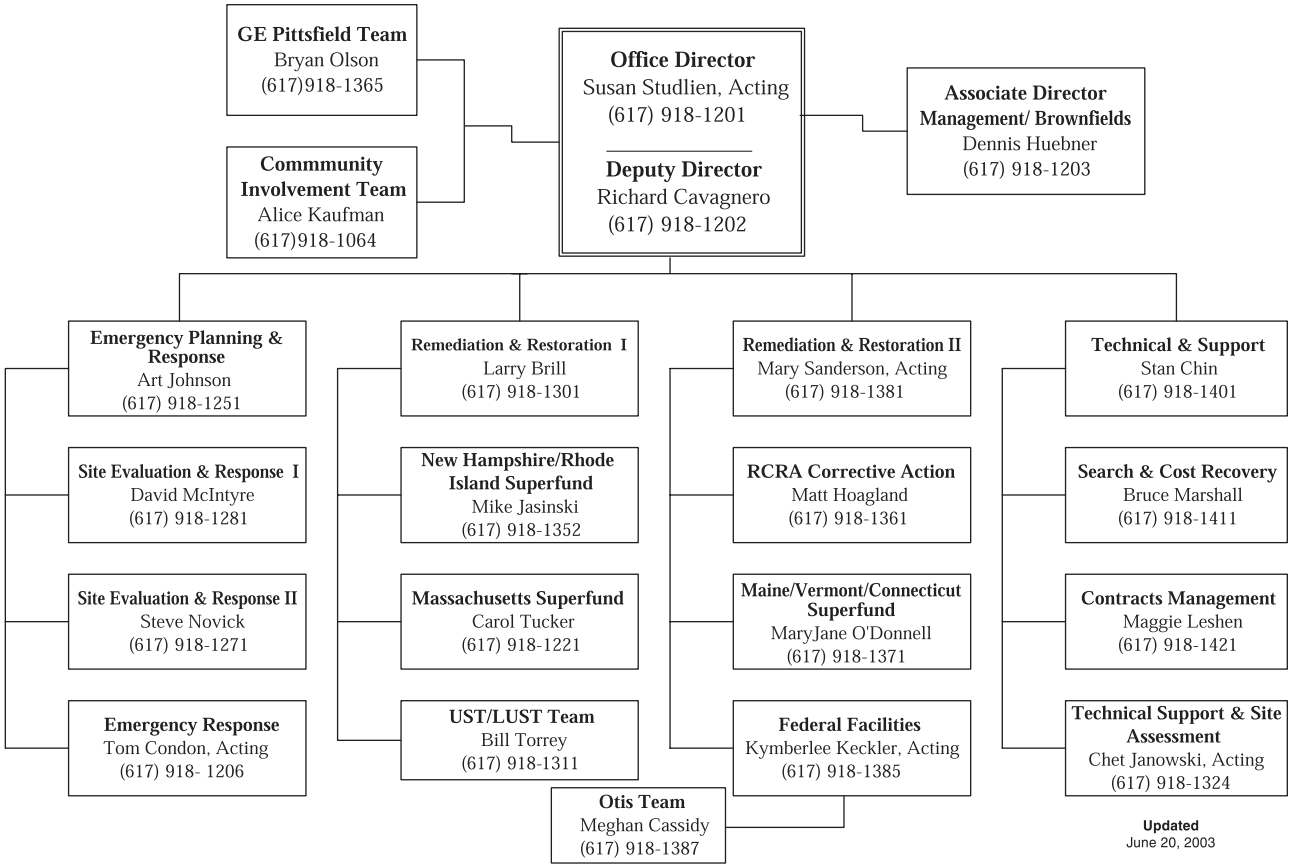

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Following is a quick summary of EPA New England's Office of Site Remediation and Restoration (OSRR) programs highlighted in this report.

National Priorities List (Superfund) Program

OSRR's remedial branches oversee long-term cleanups at sites that are typically on EPA's National Priorities List. Short-term cleanups can correct many hazardous waste problems and eliminate most threats to human health and the environment. Some sites, however, require lengthier and more complex cleanups. These may include large-scale soil remediation, restoring groundwater and taking measures to protect wetlands, estuaries, and other ecological resources. These sites are often caused by years of pollution and may take several years, even decades, to clean.

Emergency Planning and Response

OSRR's Emergency Planning and Response branch prepares for and conducts responses to discharges of oil and releases of hazardous substances. In addition to planning and preparing for regional emergency responses, getting ready for counter-terrorism activities, inspecting oil storage facilities, and cleaning up emergency oil and chemical spills, this branch oversees time-critical short-term cleanups in New England.

Short-term cleanups, also referred to as "removal actions," address immediate threats to public health and the environment. Short-term cleanups may take anywhere from a few days to a few years, depending on the type and extent of contamination.

Brownfields Program

Originally established as an EPA initiative in January 1995, the Brownfields program has evolved into an effort involving more than 15 federal partners. This collaborative effort, referred to as the Brownfields National Partnership, was created in June 1997 to promote beneficial reuse of contaminated sites. EPA's Brownfields program consists of various initiatives designed to work with local, state and tribal partners to reuse brownfields in environmentally sound ways driven by the community. Key Brownfields programs include Site Assessment Demonstration Pilots, Targeted Brownfields Assessments, Cleanup Revolving Loan Funds, Job Training Grants, Showcase Communities and financial help to state brownfields programs, including Voluntary Cleanup Programs.

EPA NEW ENGLAND'S HOMELAND SECURITY PLAN

On September 11, 2001, our country was put on alert: we must be ready to protect our resources in the event of an attack or other national emergency. As a result of this unexpected attack and the anthrax incidents that followed, EPA New England has developed a detailed security and response readiness plan that should leave the region less vulnerable in the event of an emergency. EPA is working with other government and community organizations to better protect our water, air and land resources and to respond to an emergency that threatens these resources. In its plan, the agency has outlined specific actions to address vulnerabilities and identified specific actions needed to reduce the vulnerability of our critical environmental infrastructure. EPA goals aimed at achieving better homeland security include:

Identify and Address National Environmental Vulnerabilities: EPA is working with state and interstate organizations as well as water utilities and wastewater treatment facilities to help them understand and reduce the vulnerability of public drinking water supply systems.

Improve Procedures for Making Decision and Communicating: EPA will use its Regional Incident Coordination Team (RICT) to clarify responsibilities for how to make decisions and communicate internally during significant emergency incidents. This team's Operations Manual establishes lines of authority and responsibility.

Revise External Emergency Response: EPA has been participating in terrorism and hazardous material response exercises throughout New England to ensure the agency's readiness to respond in the event of an incident. Planning and coordinating these exercises requires many state, local and federal agencies to coordinate and already have resulted in many revisions to existing emergency response plans and structures.

Increase Resources: EPA has committed significant resources over the last two years to make sure that we are better prepared than ever before to respond to an emergency of any kind. Five On-Scene Coordinators were hired, and EPA has provided extensive health and training, as well as preparedness training to all staff. In the area of drinking water, EPA has shifted resources to help water suppliers prevent and prepare for acts of terrorism.

Identify and Address National Vulnerabilities; Preparedness: EPA New England is working aggressively with state Emergency Response Commissions, Local Emergency Planning Committees and industry and community groups to ensure that they have effective preparedness strategies and the tools necessary to carry them out.

EPA is incorporating security concerns into its enforcement actions and is helping to educate industrial facilities, pipeline owners, transporters, utilities, and warehousers of chemicals throughout New England on how to make their operations more secure. Among other things, EPA New England is providing businesses with a new Industrial Security Awareness guide.

Develop a Plan for Alerting The Public During National Emergencies: EPA's existing procedures for informing the public quickly and accurately during an emergency are being tested and revised in the event of a catastrophic event.

Invest in the Security of EPA Staff and Facilities: EPA New England immediately tightened physical security in the aftermath of September 11, adding security guards and tightening visitor procedures. Other steps to strengthen our physical security will be made based on vulnerability assessments.

Develop a Data Analysis and Information Management Infrastructure: EPA has assessed its analytical capability in light of major terrorist attacks and is seeking to expand its resources making use of state and private labs. EPA, in close partnership with laboratory directors, is compiling an inventory of lab capabilities across New England. The RICT, an EPA multi-disciplinary response team, has defined operational procedures for coordinating all activities and defining how data will flow within EPA to other agencies and to the public.

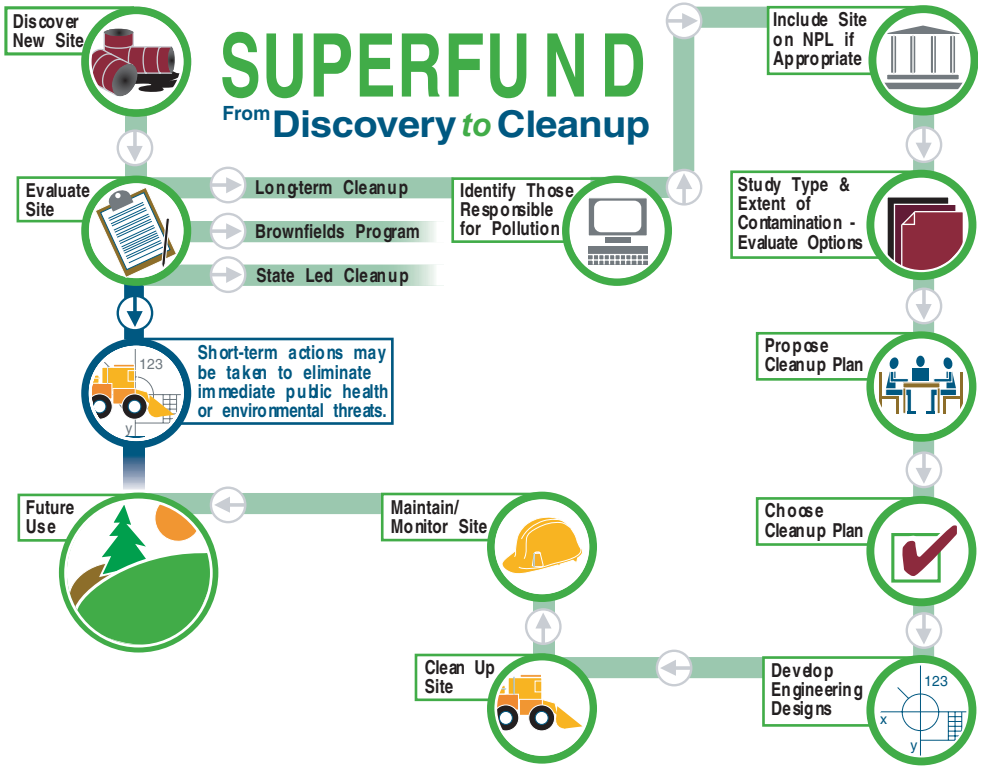
Together with state and local agencies, New England is advancing response capabilities, and ensuring the health and safety of all New Englanders.

SUPERFUND: A PRIMER

In response to growing concerns at Love Canal in New York and other sites around the country, Congress passed the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the Superfund law, on December 11, 1980. To implement this law, EPA created regulations establishing cleanup standards and procedures. These procedures were outlined in the National Contingency Plan (NCP), which dictates CERCLA response actions. The NCP includes procedures EPA and private parties must follow in selecting and completing emergency removals and long-term cleanups.

Several tools are available through the Superfund program to assess and clean up hazardous waste sites. The graphic below shows the cleanup process from discovery to cleanup. Cleaning a site may take many paths—through state sponsored cleanup programs, the Brownfields program, or a Superfund short-term or long-term cleanup action.

Today's Superfund program is the result of ongoing reform and revitalization. EPA is streamlining the program and trying to make it as fair as possible, at the same time it improves the effectiveness and consistency of the cleanup and increases community participation and public/private partnerships, and encourages economic development.



Discover Contamination (Site Discovery)

Anyone can report a suspected hazardous waste problem to the National Response Center which operates 24 hours a day, seven days a week, or to state and local authorities.

To Report an oil spill or other environmental emergency such as an oil or chemical spill, call the National Response Center at 1-800-424-8802.

Evaluate the Site (Site Assessment)

The top priority in evaluating a hazardous waste site is to determine whether or not an emergency exists. When a hazardous waste site is reported, EPA inspects the site to determine what type of "action" or cleanup procedure, if any, is necessary. EPA reviews existing data, inspects the site and may interview nearby residents to find out the history and the effects of the site on the population and the environment.

EPA New England has performed assessments on a number of sites where no decision has yet been made about whether to list the site on the National Priorities List. These sites are referred to as Sites Awaiting a NPL Decision (SAND). SAND sites include sites that have been assessed by the Superfund program, are now being addressed under state program authorities, or are in various stages of assessment and cleanup by other federal or state agencies. For additional information, visit the EPA New England Superfund SAND Web pages at www.epa.gov/ne/superfund/sand

EPA tests the soil, water and air to determine what hazardous substances were left at the site and how serious the risks may be to human health and the environment. Individuals or companies responsible for the contamination at the site may do these assessments under close EPA supervision. Many of the sites that are studied do not need cleanup by the Superfund program. Some sites do not require any action, while others are referred to the state, other EPA programs such as the Brownfields program, or other agencies or individuals for cleanup. If the site qualifies for cleanup through the Superfund program, EPA then decides whether the site is a short-term cleanup or a long-term cleanup.

Brownfields

Some hazardous waste sites, such as abandoned, idled or under-used industrial and commercial facilities, may be slightly contaminated and can be cleaned up fairly easily. These sites, where expansion or redevelopment is complicated by real or perceived environmental contamination, are commonly known as "brownfields." More information about brownfields in New England can be found in the Brownfields section of this report and on the EPA New England Brownfields program web site at www.epa.gov/ne/brownfields

Short-Term Cleanups

Short-term cleanups, also referred to as "removal actions," address immediate threats to public health and the environment, and typically address less complex or less extensive contamination problems than those that require long-term cleanup. Short-term cleanups may take anywhere from a few days to a few years to complete, depending on the type and extent of contamination. EPA also determines if additional long-term action will be necessary.

Not all short-term cleanups are equally urgent. For example, situations involving fire or explosions or imminent, catastrophic contamination of a reservoir may require prompt attention, while certain situations involving abandoned hazardous waste drums or cleanup of abandoned industrial facilities may not.

Steps in the short-term cleanup process include:

1. **Investigate the contamination at the site.**

2. **Assess factors that affect the level of risk at the site** and determine the urgency of the situation, which is the primary factor used to determine which type of short-term cleanup to conduct. There are three different types of short-term cleanups:

Classic Emergencies
include those cleanups where the release of hazardous materials requires that on-site cleanup activities be initiated within minutes or hours of determining that a short-term cleanup is appropriate.

Time-Critical Actions
are those cleanups where, based on an evaluation of the site, EPA determines that on-site cleanup activities must be initiated within six months of determining that a short-term cleanup is appropriate. For time-critical actions, EPA investigates contamination and produces an "action memorandum" authorizing and outlining the cleanup process before beginning work.

Non-Time-Critical Actions
are those cleanups where, based on an evaluation of the site, EPA determines that six months or more is available before on-site cleanup activities must begin. Non-time-critical removal actions require the preparation of an "Engineering Evaluation/Cost Analysis" (EE/CA). An EE/CA includes a description of the contamination, the threat to human health and the environment that the contamination poses, the objectives of the cleanup, the requirements that need to be met, the alternatives evaluated for addressing the contamination, and a recommended cleanup plan.

3. **Conduct the cleanup and document its completion.**

For information on short-term cleanups in New England and EPA New England's Emergency Planning and Response programs, see the Removal section of this report.

Long-Term Cleanups

Short-term cleanups can correct many hazardous waste problems and eliminate most threats to human health and the environment. Some sites, however, require lengthier cleanups. These may include restoring groundwater and taking measures to protect wetlands, estuaries and other ecological resources. These sites are often caused by years of pollution and may take several years, even decades, to clean. At any point during the long-term cleanup process, interim short-term cleanups may be done. Detailed information on long-term cleanups in New England is contained in the NPL section of this report.

Following is an explanation of the steps in the long-term cleanup process:

1. **Identify those Responsible for Pollution (begin enforcement process)**

Throughout the cleanup process, EPA works to identify companies or individuals who may have caused or contributed to the pollution at the site. These companies and individuals are known as Potentially Responsible Parties (PRPs). After completing a search to identify PRPs, EPA's first choice is for the PRPs to pay for and/or conduct the necessary studies and cleanup activities under the supervision of EPA. If the PRPs are unable or unwilling to do the work, EPA will fund the cleanup through the Superfund. EPA and the U.S. Department of Justice will then take appropriate enforcement actions to recover all the government's costs for cleaning up the site.

2. If Appropriate, Include the Site on the National Priorities List

In most cases, sites that are candidates for long-term cleanup become listed on the National Priorities List (NPL). To evaluate the dangers posed by hazardous waste sites, EPA has developed a scoring system called the Hazard Ranking System (HRS). EPA uses the information collected during the assessment phase of the process to score sites according to the danger they may pose to public health and the environment. Sites that score high enough on the Hazard Ranking System are eligible for the National Priorities List. A site may also be proposed for the National Priorities List if the Agency for Toxic Substances and Disease Registry (ATSDR) finds that it poses a significant risk to public health or if the site is chosen as a state's top priority site. The proposal is published in the Federal Register and the public has an opportunity to comment in writing on whether the site should be included on the National Priorities List. Brief summaries for all New England NPL sites are contained in the NPL section of this report. Detailed fact sheets and other site information are also available on the Internet, at www.epa.gov/ne/superfund/sites.

3. Study Type and Extent of Contamination and Evaluate Cleanup Options (Remedial Investigation/Feasibility Study)

A detailed study of the site is done to identify the cause and extent of contamination at the site, the possible threats to the environment and the people nearby, and options for cleaning up the site.

4. Propose a Cleanup Plan and Respond to Public Comments

EPA uses information from the EPA Remedial Investigation/Feasibility Study (RI/FS) to develop and present a proposed plan for long-term cleanup to citizens, and to local and state officials for comment. The proposed plan describes the various cleanup options under consideration and identifies the option EPA prefers. The community has at least 30 days to comment on the proposed plan. EPA may also invite community members to a public meeting to express their views and discuss the plan with EPA (and sometimes state) officials.

5. Choose Cleanup Plan (Record of Decision)

Once the public's concerns are addressed, EPA publishes a Record of Decision, which describes how the agency plans to clean up the site. EPA will also notify the community of the cleanup decision.

6. Develop Engineering Designs for Cleanup (Remedial Design)

Next, the cleanup method is designed to address the unique conditions at the site. This is called the Remedial Design. The design and actual cleanup is conducted by EPA, the state, or by the parties responsible for the contamination at the site. EPA closely oversees this design phase of the cleanup at the site. When the design is completed, EPA informs the community of the design and the next steps that will take place at the site.

7. Cleanup the Site (Remedial Action)

The cleanup process itself involves the removal, treatment, and/or disposal of contaminants at a site, and then the restoration of the site to a condition that is not dangerous to people or the environment. This step may involve different cleanup methods, such as the construction of a plant to treat contaminated groundwater, or the excavation and treatment of contaminated soil.

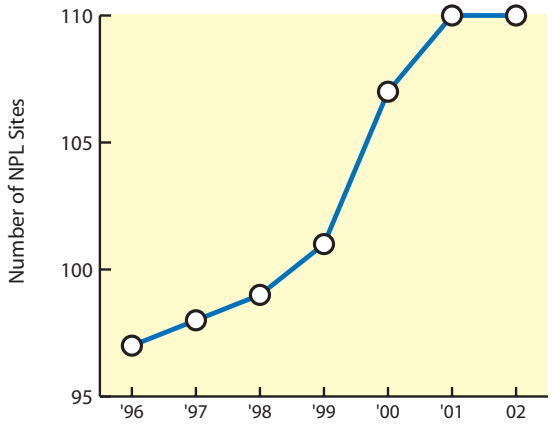
8. Maintain and Monitor the Site (Operations and Maintenance)

EPA can put in place equipment and manpower necessary to clean up a site, but it may take a long time to return a site to the way it was before it was contaminated (as in the case of long-term treatment of contaminated groundwater). Some sites, due to the extent of contamination, may never return to the way they were prior to the pollution; however, EPA will make sure that the site will be safe for the people living around the site now and in the future. EPA regularly monitors sites to make sure they remain safe. If there is any indication that a problem has arisen, immediate action will be taken to make the site safe again. NPL sites that meet all federal cleanup standards are deleted from the National Priorities List.

SUPERFUND LONG-TERM CLEANUP PROGRAM (NATIONAL PRIORITIES LIST)

Superfund distinguishes between short-term and long-term cleanup efforts. Long-term responses, also called "remedial actions," involve complex and highly contaminated sites that often require several years to fully study the problem, determine and plan a remedy and clean up the hazardous waste. There are 97 sites on the final National Priorities List (NPL or Superfund) in New England. An additional three sites have been proposed to the list and ten sites have been deleted because all cleanup has been complete. During 2002, two New England sites were added to the NPL.

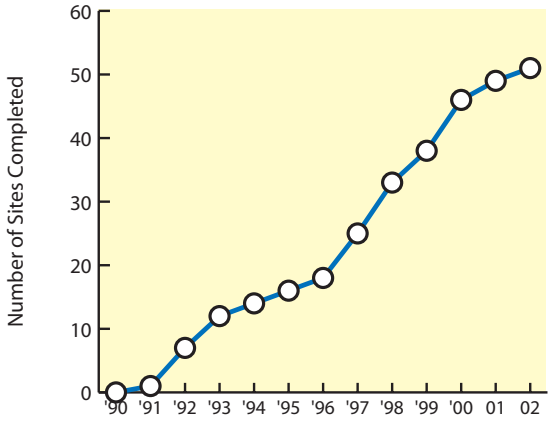
Cumulative Number of Sites Added to National Priorities List in New England by Year, 1996-2002



Source: EPA New England, January 1, 2003

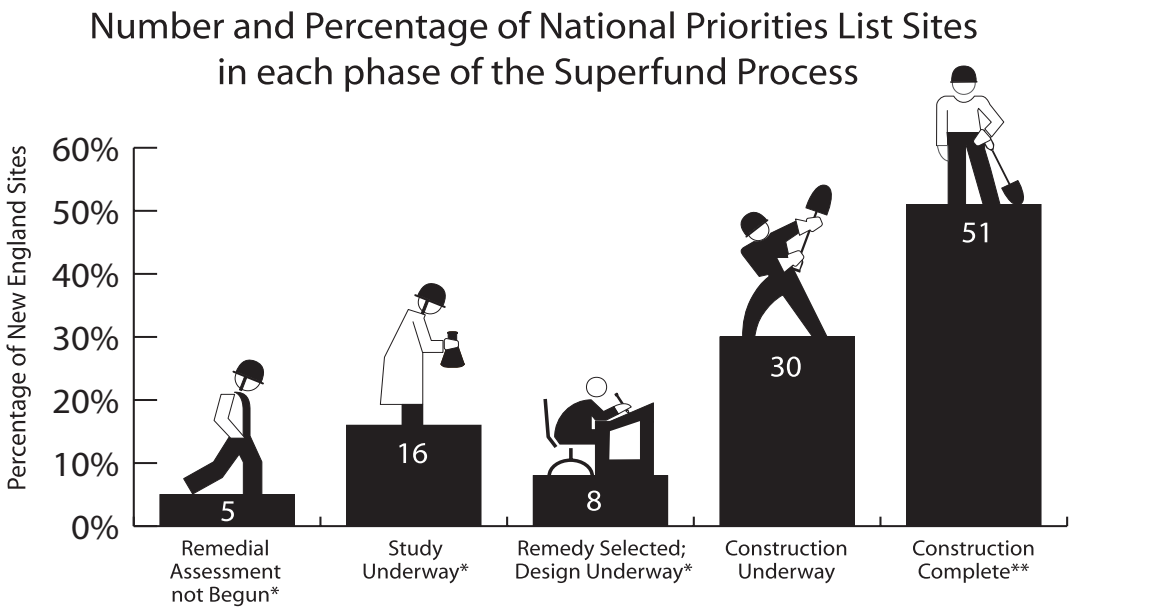
As the Superfund program enters its third decade, the landscape of cleanup programs has changed dramatically. At one time, Superfund was the only program dealing with our nation's abandoned hazardous waste sites. Today, the federal Brownfields program, state regulatory and voluntary cleanup programs all encourage and carry out site cleanups. EPA New England, working with the states, continues to evaluate sites to determine the best approach for cleanup and for adding sites to the NPL.

Cumulative Number of National Priorities List Sites cleaned up in New England by year, 1990-2002



Source: EPA New England, January 1, 2003

At three-quarters of New England NPL sites, EPA has either completed construction of all cleanup measures or has construction underway. Examples of cleanup measures include construction of an impermeable cap, a wastewater treatment plant, or a groundwater pump and treat system. Nationwide, EPA has completed construction of cleanup solutions at 848 sites, 51 in New England.



* may include sites where early action has occurred

** long-term monitoring, operation, and maintenance ongoing

Source: EPA New England, January 1, 2003

Our work is not done, however, when construction is done. At many sites, cleanup systems must be operated and maintained for the long-term, while conditions at the site must be monitored and reviewed periodically to make sure the remedies are still protecting the environment. The graphic on the next page shows the status of each project in New England.

	Remedial Assessment not Begun*	Study Underway*	Remedy Selected; Design Underway*	Construction Underway	Construction Complete**
CONNECTICUT	Broad Brook Mill^	Durham Meadow Nutmeg Valley Rd Precision Plating Scovill Landfill SRS		Linemaster Sw. N.London Sub Old Southington Raymark	Beacon Heights Cheshire GWater Gallups Quarry Kellogg-Deering Laurel Park Revere Textile Yaworski Lagoon Barkhamsted
MASSACHU-SETTS	Haverhill Landfill Nuclear Metals Sutton Brook	Blackburn & Union GE-Housatonic^ Hath.& Patterson Shpack Landfill S.Weymouth NAS	Atlas Tack Natick Army Lab Naval Weapons	Baird & McGuire Fort Devens Hanscom AFB Industriplex Iron Horse Park Army Matls Tech. New Bedford Nyanza Otis ANG Base Silresim WR Grace/Acton Wells G&H	Cannon Eng. Charles George LF Devens-Sudbury Ann. Groveland Wells Hocomonco Pond Norwood PCBs Plymouth Harbor PSC Resources Re-Solve, Inc. Rose Disposal Pit Salem Acres Sullivan's Ledge
MAINE	Callahan Mine		Eastland Woolen West Site/Hows Cor.	Portsmouth NSY	Brunswick NAS Eastern Surplus Loring AFB McKin Co. O'Connor Co. Pinette's Salvage Saco Municipal LF Saco Tannery Union Chemical Winthrop Landfill
NEW HAMP-SHIRE		Beede Waste Oil Mohawk Tannery^	Dover Landfill	Fletcher's Paint N.H. Plating Ottati & Goss Savage Muni. Somersworth LF	Auburn Road LF Coakley Landfill Kearsarge Metallurg. Keefe Enviro. Mottolo Pig Farm Pease AFB South Muni. Well Sylvester Tibbetts Road Tinkham Garage Town Garage/Radio Beac.
RHODE ISLAND		Centredale Manor W.Kingston/URI	Rose Hill Landfill	Central Landfill Davis Liquid Davisville NCBC Newport NETC Peterson/Puritan Picillo Farm	Davis GSR Landfill Landfill & Res.Rec. Stamina Mills Western Sand & Gravel
VERMONT		Elizabeth Mine Ely Copper Mine	Pownal Tannery	Parker Landfill Pine Street Canal	Bennington Landfill BFI Landfill Burgess Bros. LF Darling Hill Dump Old Springfield LF Tansitor Electronics

* may include sites where early actions (e.g., removal actions) have occurred or are underway
** long-term monitoring, operation, and maintenance ongoing
^ proposed NPL site
Note: Statistics represent most-advanced Operable Unit at each site, additional activities may be ongoing at these sites.

Source: EPA New England, January 1, 2003

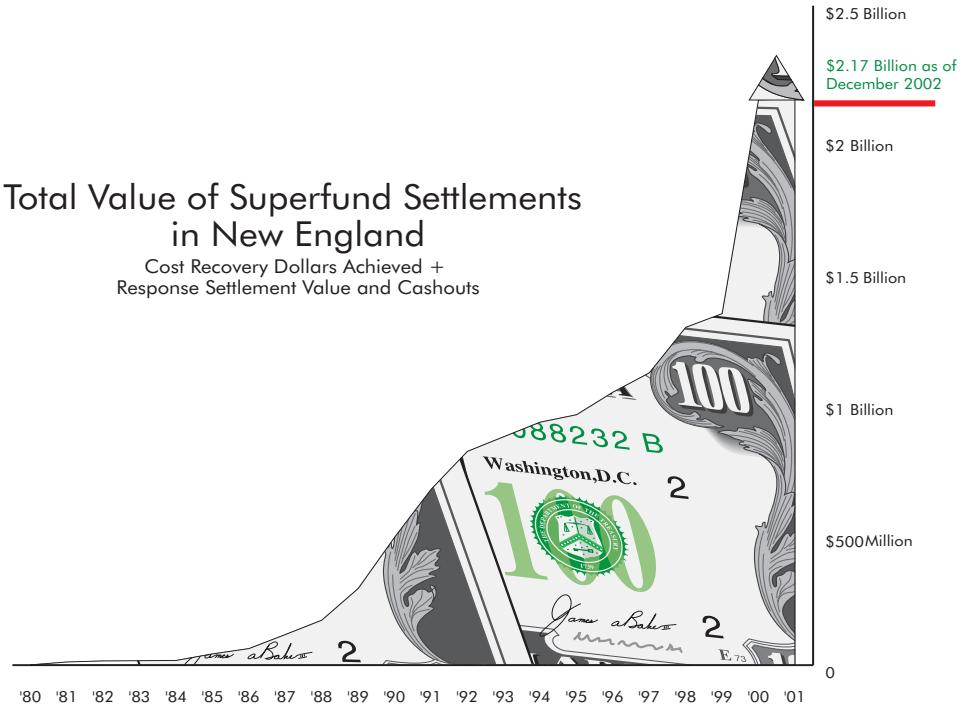
Cumulative Federal Superfund Dollars Expended at National Priorities List Sites in New England, 1980-2002

CT: $190.8 million
MA: $674.9 million
ME: $92.8 million
NH: $124.6 million
RI: $64.5 million
VT: $38.3 million
TOTAL : $1.186 billion

Source: EPA New England, January 1, 2003

EPA has spent nearly $1.2 billion from the Superfund Trust Fund to study and clean sites on the National Priorities List sites in New England.

EPA New England, with the cooperation of the U.S. Department of Justice, continues to ensure that companies responsible for contamination at sites pay their fair share of cleanup costs. In 2002, parties responsible for cleanups in New England, (via direct payments to the Superfund Trust Fund or via funding of studies and cleanup work, committed more than $22 million), bringing the overall total to more than $2.17 billion since the start of the Superfund program.



Source: EPA New England, January 1, 2003

While completing construction of cleanup remedies and deleting sites from the NPL symbolize the culmination of productive partnerships and hard work, true success comes when sites are cleaned well enough to allow for redevelopment. EPA New England, through the Superfund Redevelopment Initiative, is working with state and local governments to examine and rewrite land-use plans for National Priorities List sites and is designing remedies that encourage reuse.

The following pages outline specific information on the status and progress at NPL sites.

MASSACHUSETTS

Following are a few "Fast Facts" about EPA National Priorities List sites in Massachusetts:

- **71%** of Massachusetts Superfund sites (proposed, final, and deleted) on the National Priorities List - **25** of **35** sites - have undergone or are undergoing cleanup construction.
- **12** sites have all cleanup construction completed, **13** sites have cleanup construction underway.
- **Three** Massachusetts sites have been deleted from the NPL, Plymouth Harbor/Cannon Engineering in Plymouth, Salem Acres in Salem, and Fort Devens Training Annex in Sudbury.
- During 2002, **one** Massachusetts site was formally added to the NPL, Hathaway & Patterson in Mansfield. The GE-Housatonic River site in Pittsfield has been proposed for inclusion on the NPL.
- The Superfund Program has spent **$747.1** million on National Priorities List sites in Massachusetts.

EPA has helped promote economic development by removing **645** Massachusetts sites from the CERCLIS list of waste sites, including **40** during 2002.

Source: EPA New England, January 1, 2003

STATUS OF NEW ENGLAND NATIONAL PRIORITIES LIST SITES
MASSACHUSETTS

Acton
W.R. Grace & Co. Acton Plant

for more information on this project, see: www.epa.gov/ne/superfund/sites/graceacton

NPL Status: Listed in 1983
Cleanup Status:
Source Areas: Construction Complete
Groundwater: Study Underway
Superfund $$ Spent: $4.1 million

Ashland
Nyanza Chemical Waste Dump

for more information on this project, see: www.epa.gov/ne/superfund/sites/nyanza

NPL Status: Listed in 1983
Cleanup Status:
Source Areas: Construction Complete
Other Areas: Study Underway
Superfund $$ Spent: $56.5 million

Bedford
Naval Weapons Industrial Reserve Plant

for more information on this project, see: www.epa.gov/ne/superfund/sites/nwirp

NPL Status: Listed 1994
Cleanup Status: Study, Design, and Construction Underway
Superfund $$ Spent: $481,000

MASSACHUSETTS

Bedford, Concord, Lexington, and Lincoln
Hanscom Field/Hanscom Air Force Base

for more information on this project, see: www.epa.gov/ne/superfund/sites/hanscom

NPL Status: Listed in 1994
Cleanup Status: Study, Design, and Construction Underway
Superfund $$ Spent: $566,000

Billerica
Iron Horse Park

for more information on this project, see: www.epa.gov/ne/superfund/sites/ironhorse

NPL Status: Listed in 1983
Cleanup Status:
Shaffer Landfill & Lagoons: Construction Underway
Other Areas: Study Underway
Superfund $$ Spent: $10.8 million

Bridgewater
Cannons Engineering Corp.

for more information on this project, see: www.epa.gov/ne/superfund/sites/cannon

NPL Status: Listed in 1983
Cleanup Status: All Construction Completed in 1991
Superfund $$ Spent: $3.7 million

Concord
Nuclear Metals

for more information on this project, see: www.epa.gov/ne/superfund/sites/nmi

NPL Status: Listed in 2001
Cleanup Status: Study Underway and Removal Activities
Superfund $$ Spent: $2.4 million

Dartmouth
ReSolve, Inc.

for more information on this project, see: www.epa.gov/ne/superfund/sites/resolve

NPL Status: Listed in 1983
Cleanup Status: All Construction Completed in 1998
Superfund $$ Spent: $12.3 million

Devens, Ayer, Harvard, Lancaster, and Shirley
Fort Devens

for more information on this project, see: www.epa.gov/ne/superfund/sites/devens

NPL Status: Listed in 1989
Cleanup Status: Study, Design, and Construction Underway
Superfund $$ Spent: $5.2 million

Fairhaven
Atlas Tack

for more information on this project, see: www.epa.gov/ne/superfund/sites/atlas

NPL Status: Listed in 1990
Cleanup Status: Remedy Selected; Design Completed
Superfund $$ Spent: $5.1 million

Falmouth
Otis Air National Guard Base/Camp Edwards

for more information on this project, see: www.epa.gov/ne/superfund/sites/otis

NPL Status: Listed in 1989
Cleanup Status: Study, Design, and Construction Underway
Superfund $$ Spent: $6.3 million

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Groveland
Groveland Wells Nos. 1 & 2

for more information on this project, see: www.epa.gov/ne/superfund/sites/groveland

NPL Status: Listed in 1983
Cleanup Status: All Construction Completed in 2000
Superfund $$ Spent: $15.2 million

Haverhill
Haverhill Landfill

for more information on this project, see: www.epa.gov/ne/superfund/sites/haverhill

NPL Status: Listed in 1986
Cleanup Status: State-Lead
Superfund $$ Spent: $518,000

Holbrook
Baird & McGuire

for more information on this project, see: www.epa.gov/ne/superfund/sites/baird

NPL Status: Listed in 1983
Cleanup Status:
Water Supply: State-Lead
All Other Areas: Construction Complete
Superfund $$ Spent: $209.3 million

Lanesborough
F.T. Rose Disposal Pit

for more information on this project, see: www.epa.gov/ne/superfund/sites/ftrose

NPL Status: Listed in 1986
Cleanup Status: All Construction Completed in 1994
Superfund $$ Spent: $1.3 million

Lowell
Silresim Chemical Corp.

for more information on this project, see: www.epa.gov/ne/superfund/sites/silresim

NPL Status: Listed in 1983
Cleanup Status: Construction Underway
Superfund $$ Spent: $45.9 million

Mansfield
Hathaway & Patterson

for more information on this project, see:
www.epa.gov/ne/superfund/sites/hathaway

NPL Status: Proposed in 2001
Cleanup Status: Study Underway
Superfund $$ Spent: $2.7 million

Natick
Natick Laboratory Army Research, Development, and Engineering Center

for more information on this project, see: www.epa.gov/ne/superfund/sites/naticklab

NPL Status: Listed in 1994
Cleanup Status: Study and Construction Underway
Superfund $$ Spent: $791,000

New Bedford
New Bedford Harbor

for more information on this project, see:
www.epa.gov/ne/superfund/sites/newbedford

NPL Status: Listed in 1983
Cleanup Status:
Hotspot & Harbor: Construction Underway
Upper Bay: Study Underway
Superfund $$ Spent: $141 million

Sullivan's Ledge

for more information on this project, see:
www.epa.gov/ne/superfund/sites/sullivansledge

NPL Status: Listed in 1984
Cleanup Status: All Construction Completed in 2000
Superfund $$ Spent: $6.4 million

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Norton
Shpack Landfill

for more information on this project, see: www.epa.gov/ne/superfund/sites/shpack

NPL Status: Listed in 1986
Cleanup Status: Study Underway
Superfund $$ Spent: $1.2 million

Norwood
Norwood PCBs

for more information on this project, see: www.epa.gov/ne/superfund/sites/norwood

NPL Status: Listed in 1986
Cleanup Status: All Construction Completed in 1999
Superfund $$ Spent: $35.3 million

Palmer
PSC Resources

for more information on this project, see: www.epa.gov/ne/superfund/sites/psc

NPL Status: Listed in 1983
Cleanup Status: All Construction Completed in 1998
Superfund $$ Spent: $4.1 million

Pittsfield
General Electric —Housatonic River

for more information on this project, see: www.epa.gov/ge

NPL Status: Proposed in 1997
Cleanup Status: Study Underway; Removal Activities
Superfund $$ Spent: $80.8 million

Plymouth
Plymouth Harbor/Cannons Engineering

for more information on this project, see: www.epa.gov/ne/superfund/sites/plymouth

NPL Status: Deleted in 1993
Cleanup Status: All Construction Completed in 1992
Superfund $$ Spent: $576,000

Sudbury, Maynard, Hudson, and Stow
Fort Devens-Sudbury Training Annex

for more information on this project, see:
www.epa.gov/ne/superfund/sites/sudburyannex

NPL Status: Listed in 1990
Cleanup Status: All Construction Completed in 2000
Superfund $$ Spent: $1.4 million

Tewksbury
Sutton Brook Disposal Area

for more information on this project, see:
www.epa.gov/ne/superfund/sites/suttonbrook

NPL Status: Listed in 2001
Cleanup Status: Assessment Not Begun; Removal Activities
Superfund $$ Spent: $3.8 million

Tyngsboro
Charles George Reclamation Trust Landfill

for more information on this project, see:
www.epa.gov/ne/superfund/sites/charlesgeorge

NPL Status: Listed in 1983
Cleanup Status: All Construction Completed in 1998
Superfund $$ Spent: $63.2 million

Walpole
Blackburn and Union Privileges

for more information on this project, see:
www.epa.gov/ne/superfund/sites/blackburn

NPL Status: Listed in 1994
Cleanup Status: Study Underway; Removal Activities
Superfund $$ Spent: $1.3 million

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Watertown
Army Material Technology Laboratory

for more information on this project, see: www.epa.gov/ne/superfund/sites/amtl

NPL Status: Listed in 1994
Cleanup Status:
- Area I: Construction Complete
- Soil & Groundwater: Construction Underway
- Charles River: Study Underway

Superfund $$ Spent: $718,000

Westborough
Hocomonco Pond

for more information on this project, see: www.epa.gov/ne/superfund/sites/hocomonco

NPL Status: Listed in 1983
Cleanup Status: All Construction Completed in 1999
Superfund $$ Spent: $1.6 million

Weymouth
South Weymouth Naval Air Station

for more information on this project, see: www.epa.gov/ne/superfund/sites/sweymouth

NPL Status: Listed in 1994
Cleanup Status: Study Underway
Superfund $$ Spent: $2.2 million

Woburn
Industri-Plex

for more information on this project, see: www.epa.gov/ne/superfund/sites/industriplex

NPL Status: Listed in 1983
Cleanup Status:
- Source Area: Construction Underway
- Groundwater/River: Study Underway

Superfund $$ Spent: $7.1 million

Wells G&H

for more information on this project, see: www.epa.gov/ne/superfund/sites/wellsgh

NPL Status: Listed in 1983
Cleanup Status:
Source Areas: Construction Underway
Central Area/River: Study Underway
Superfund $$ Spent: $11.4 million

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MASSACHUSETTS WATCH LIST

Sites included on the "Watch List" are those that both the state and EPA Site Assessment programs agree merit increased state-federal coordination and oversight. These sites are a small subset of the several thousand "active" sites included in the EPA New England and New England state inventories of known and suspected hazardous waste disposal sites. Criteria for including sites on the Watch List is loosely defined. In general, the Watch List includes sites that warrant special monitoring because they are strong NPL candidates, are the subject of considerable public interest, are particularly large and/or complex, require significant agency or state expenditures, or are state-lead sites that may be referred to EPA in the future. Watch List sites may be, but are not necessarily, listed in the federal CERCLIS inventory. Sites may be added or dropped if their status changes.

The purpose of the Watch List is to facilitate rapid information exchange between the states and EPA regarding the current status of these high profile sites, and to ensure agencies are kept abreast of key site issues. Agencies have agreed to share site information and to revise the status of sites as needed. At a minimum, however, the entire list will be reviewed and revised as appropriate every six months. For further information on any of these sites, or other New England sites in EPA's CERCLIS inventory, see http://www.epa.gov/region1/superfund/site/

Andover

Reichold Chemical MAD001000165

This site is a 45-acre former manufacturing facility for phenolic, urea formaldehyde and epoxy resins that operated from 1930 until 1990. Wastes were disposed of in unlined leaching ponds on-site. Red chemical wastes were discovered leaching into the Shawsheen River in 1970. Several site investigations have been performed via the state waste site cleanup program and releases to groundwater and surface water are documented. The site has been identified as a "state lead" site since July 2000, and is classified as a Tier 2 (medium priority) site in phase IV of investigation and cleanup under the state program. An EPA contractor completed a site assessment in 1996.

This site was included in the General Accounting Office (GAO) report of sites awaiting NPL decisions. It is not a RCRA corrective action site.

Ashland

Former Three C Electrical MAD092195874

This is a 1.8-acre site which is currently used as a fellowship school with a playground and an adjacent commercial property. The site is located immediately to the south of the Nyanza NPL site. In 1976, the Three C Electrical Company bought the property from General Electric and repaired and maintained high voltage equipment on-site. In 1983, Three C moved to a new location a few blocks to the east. PCB contamination has been detected in the soils, and in 1995 EPA removed PCB soils in the playground area. A portion of the site requires further action under the Massachusetts Contingency Plan (MCP). In 2002, the state identified a potential Imminent Hazard condition due to PCBs in surface soil on the commercial property and required an Immediate Response Action by the current owner, Framingham Excavating Company. A fence has been installed to restrict access to the contaminated area and further soil sampling is scheduled for the spring of 2003. A Site Reassessment is currently underway by an EPA contractor. This site was included in the GAO report of sites awaiting NPL decisions. It is not a RCRA corrective action site.

Ashland

Colonial Lacquer & Paint MAD001025402

This site (also known as Cadillac Paint) is an abandoned paint and varnish manufacturing site that operated from 1937 to 1987. It is located on a three-acre parcel in a residential area. VOCs have been detected in the soils and groundwater. Public water is available; however, some residents in the area may still be using private wells. The EPA removal program conducted an assessment in 1996 and concluded that no action was required. This site has been identified as a "state lead" site since July 2000; however' no further assessment or cleanup work has been conducted since that time. An EPA contractor completed a site assessment in 1996. This site was included in the GAO report of sites awaiting NPL decisions. It is not a RCRA corrective action site.

Attleboro

Texas Instruments, Inc. MAD007325814

Texas Instruments (TI) manufactured metal products at this 270-acre site since the early 1900s, and first noted VOCs in on-site process water productions wells in 1983. A groundwater extraction system has operated intermittently since 1986. DNAPL (dense liquid) is present in bedrock and the groundwater table is shallow. TCE breakdown products, including vinyl chloride, are present. The site also has an acid neutralization pond that was filled in about 1966, and former sodium hydroxide and caustic sludge lagoons with elevated mercury levels, which were capped in 1981; that area is now a ball field.

An on-site landfill for scrap metal contaminated with low-level radiation was remediated under the direction of the Nuclear Regulatory Commission in 1992-1993. In 1996, during TI's nuclear decommissioning project, radioactive, solvent-contaminated soil was removed. MA DEP has neither details of the remediation of these soils nor data to determine if the potential for radiation in groundwater was elevated. Citizens have concerns about elevated cancer incidences in the area. As part of a recent investigation into contamination at building #3, metals were detected in NPDES outfall #2 above ambient water quality criteria. The 2000 NPDES permit and 1998 EPA site Inspection Prioritization report have raised concerns about metal contamination in Cooper's Pond, locate on the site. Land near Cooper's Pond is reportedly a potential future school location.

TI submitted results of a study to MA DEP but the study was found to be inadequate. MA DEP has pursued enforcement actions against the company. The site has complex hydrogeology and reports from nearby sites conflict with information in the TI reports. Portions of this large site have been sold while the company has been downsizing its workforce. No work is proposed currently for the site because of a low hazard ranking score. However, new conditions may come to light that would warrant its reevaluation. This site was not included in the GAO report of sites awaiting NPL decisions, and is not a RCRA corrective action site.

Attleboro

Walton & Lonsbury MAD001197755

This site was archived in 1996, however, based on new information, MA DEP may request that it be reinstated. The site is an existing manufacturing facility that conducted limited chrome plating. Groundwater is contaminated with chlorinated solvents and metals and in some areas has a pH of approximately 2. Low levels of chlorinated solvents have been detected in

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indoor air at seven residences. The low pH groundwater is impacted with high concentrations of chromium and is discharging into Bliss Brook. The concentration of chromium in the surface water exceeds Ambient Water Quality Criteria. In some areas of the residential property backyards, where the groundwater is shallow and possibly discharging to the surface, there are high concentrations of chromium in the soil. Additional investigation is needed to assess the potential for an imminent hazard.

The company has entered into an Administrative Consent Order with MA DEP. The order established an escrow account into which monthly payments are made to fund the assessment and cleanup. Recently, due to worsening finances, the payments have not been made and the company is no longer conducting assessment or any remediation.

Additional assessment and remediation of the chlorinated solvent plume, the surface water and possibly the soil at the residential property is necessary, and the company is not able to conduct the work. MA DEP is considering requesting EPA assistance to address the metals/low pH groundwater discharging into the brook. MA DEP may be able to address the source area of chlorinated solvents impacting indoor air at residential dwellings.

Beverly

Former Casco Chemical MAD002577617

The site is a former chemical company which operated on land that has since been incorporated into the Beverly Municipal Airport. The company operated on-site from the mid-1960s until 1985, mixing and repackaging detergents, oil spill containment chemicals and non-petroleum cutting oil. Casco also stored a variety of other chemicals including organic solvents, oils, acids, inorganic chemicals, and pesticides on-site. Soils, sediments and groundwater at the site are contaminated with substances associated with the site. The site is classified as a Tier 2 (lower priority, no direct oversight) site under the Massachusetts Contingency Plan, currently in phase II of assessment and cleanup and is designated as a "state lead" site by the federal Superfund program. Citizens are concerned that contamination from the site may be migrating towards Lake Wenham, a drinking water resource.

This site was included in the GAO report of sites awaiting NPL decisions. It is not a RCRA corrective action site.

Vitale Fly Ash Property MAD981068273 (3-0235)

This is an 18-acre sand and gravel pit which was used as an unpermitted landfill. Fly ash from the New England Power Company is known to have been disposed of at the landfill, and can be seen at the land surface and eroding into Airport Stream. The fly ash deposits are up to 36' deep, and much of the waste is saturated, lying below the groundwater table. Groundwater, surface water and soils are contaminated with hazardous wastes associated with the site. The city of Beverly acquired the site for back taxes in 1980. It is classified as a Tier 2 (lower priority, no direct oversight) site under the MCP, currently in phase II of assessment and cleanup and is designated as a "state lead" site by the federal Superfund program. Citizens are concerned that contamination from the site may be migrating towards Lake Wenham, a drinking water resource.

This site was included in the GAO report of sites awaiting NPL decisions. It is not a RCRA corrective action site.

Beverly Airport Septic System MAD981068273

The site is the former location of U.S. Army NIKE Missile Battery BO-15 and is now part of the Beverly Municipal Airport. The septic system was constructed by the Army in the 1950s, and later used by a nearby chemical manufacturing and storage company from the mid 1960s until 1985. Due to the nature of the operations historically conducted at the site, a variety of chemicals, including chlorinated solvents, may have been disposed of in the septic system, and hazardous substances have been detected in soils, wetland sediment, surface water, and groundwater samples at the site. This is a Tier 2 (lower priority, no direct oversight) site under the MCP, currently in phase II of assessment and cleanup and is designated as a "state lead" site by the federal Superfund program. Citizens are concerned that contamination from the site may be migrating towards Lake Wenham, a drinking water resource.

This site was included in the GAO report of sites awaiting NPL decisions. It is not a RCRA corrective action site.

Billerica

Roy Brothers Haulers MAD009870643

The site is a chemical hauling operation transporting liquid and dry industrial chemicals. Numerous hazardous waste disposal areas have been identified on-site, and historical waste handling practices have resulted in contamination of soil, groundwater and surface water sediments. The site has been assessed via the MCP and is classified as RAO-C, meaning investigations and/or remedial actions have been taken to reduce the public health or environmental risk. The RAO statement is subject to audit by the state and pending completion of the audit, the site is designated as a "state lead" site by the federal Superfund program. An EPA contractor completed a site assessment for this site in 1996.

This site was included in the GAO report of sites awaiting NPL decisions. It is not a RCRA corrective action site.

Burlington

Former Alto-tronics MAD049416001

This former printed circuit boards manufacturer stored chemicals on-site and released chemical wastes to the sewer system. Soils, groundwater, and surface water sediments have been contaminated with substances associated with the site. The site has been identified as a "state lead" site since July 2000, and is a Tier 1A, Phase IV (top priority, direct state oversight) site in the state program. An EPA contractor completed a site assessment in 1996.

This site was included in the GAO report of sites awaiting NPL decisions. It is not a RCRA corrective action site.

Former RCA Corp. MAD001060698

Between 1958 and 1994, this 158-acre property was used for the manufacture and testing of military electronics equipment. Numerous chemical and waste storage and disposal areas have been identified during investigations of the site, and soils, groundwater and surface water sediments have been impacted by releases of hazardous substances. This site has been identified as a "state lead" site since July 2000, and is a Tier

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1B, Phase V (medium priority) site in the state program. EPA completed a site assessment for this property in 1996.

This site was included in the GAO report of sites awaiting NPL decisions. It is not a RCRA corrective action site.

Canton

Reliable Elec. Finish MAD001059815

This is a 2.2-acre inactive electroplating facility that operated from 1967 to 1985. Wastes generated include methanol, metal hydroxide sludge and other hazardous substances. Wastes were pre-treated prior to being discharged into the Metropolitan District Commission system. Contamination has been detected in the soils and groundwater. There is concern that the groundwater will contaminate nearby condominium wells. This site has been identified as a "state lead" site since July 2000, and is a Tier 1B (medium priority) site under the MCP. EPA completed a site assessment for this site in 1996.

This site was included in the GAO report of sites awaiting NPL decisions. It is not a RCRA corrective action site.

Danvers

Creese & Cook MAD001031574

The site is an abandoned tannery located on a 10.7-acre parcel along the Crane River. The tannery occupied the area from the 1930s until 1984. There have been recent proposals to develop the property for residential use. Two landfills and one lagoon are located on the site. Wastes from these sources were placed in a partially lined waste disposal cell in 1990. Elevated levels of arsenic remain in surface soils and contaminants have also been detected in the groundwater and surface water. The site is a Tier 1C (no direct state oversight) site in phase IV of the MCP site evaluation and cleanup process. An EPA contractor completed a site assessment for this site in 1996, and the EPA removal program is evaluating the site for possible further action.

This site was included in the GAO report of sites awaiting NPL decisions. It is not a RCRA corrective action site.

East Bridgewater

Eastern States Steel MASFN0103006

EPA completed a removal action at the site, as well as at the abutting properties (MBTA Railroad and Precise Engineering). The town is interested in redeveloping this site as a Brownfield site. MA DEP will attempt to secure alternative funding sources for the initial groundwater assessment.

This site is currently listed in CERCLIS as a removal-only site and was not included in the GAO report of sites awaiting NPL decisions. It is not a RCRA corrective action site.

East Bridgewater

Precise Engineering

EPA completed a removal action at this site, as well as at the abutting properties (MBTA and Eastern States Steel). MA DEP will be working with the town in an attempt to have this site redeveloped as a Brownfield site. Before exhausting all their resources, the Potentially Responsible Party determined that the groundwater is impacted with chlorinated solvents and petroleum.

While installing a fence around the property, EPA discovered free-phase oil below the surface and next to a stream that is a tributary to the Canoe River. MA DEP hired a contractor to remove the oil-contaminated soil who found oil contamination in the building foundation. A recovery trench with oil collection sumps was installed along the foundation. MA DEP is periodically monitoring and removing the oil when feasible. Additional assessment activities are being conducted to determine whether additional work is necessary to remove the oil.

This site was not included in the GAO report of sites awaiting NPL decisions. It is not a RCRA corrective action site.

Everett

Former Coal Gasification Plant MAD981063142

The site (also known as Eastern Gas & Fuel and Island End River) is a former coal tar processing facility abutting the Island End River which operated from the 1890s to the late 1950s. It encompasses at least six properties over an area of eight acres in Everett and Chelsea. Releases of coal tar wastes to ground and surface water are documented, and the site is currently classified as a Tier 1A (direct state oversight) site under the MCP in phase II of site investigation and clean-up. The US Coast Guard is involved with emergency actions to address releases of coal tar to the Island End River. The site has a long and complicated history of investigation, and is designated as a "state lead" site by the federal Superfund program.

This site was included in the GAO report of sites awaiting NPL decisions. It is not a RCRA corrective action site.

Foxboro

Cocasset Street MAN000103179

This site was formerly used for disposal of septic wastes in lagoons with some of the wastes coming from industrial facilities. As a result, groundwater and soil in the area are contaminated with metals, VOCs and pentachlorophenols (some of the waste came from Hatheway & Patterson in Mansfield, a recently listed NPL site). The property is currently owned by an estate, and the estate's only asset is the property. Parties that were interested in residential development of the property had been conducting limited assessment activities. Recent sampling indicated that elevated concentrations of dioxin exist in the soil. The parties are no longer interested in developing the land. The Rumford River, which also flows through the Hatheway & Patterson Superfund site and is impacted by dioxin from that site, also flows through this site. MA DEP has referred the site to the EPA for further assessment. The town is interested in applying for an EPA Brownfield Grant to further evaluate and possibly clean up some of the contamination.

This site was not included in the GAO report of sites awaiting NPL decisions and is not a RCRA corrective action site.

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Framingham

Commonwealth Gas MAD980524151

This is a 35-acre former gas plant that operated from the late 1800s until 1967. Contamination of soils, ground and surface water resulted from the disposal, induced infiltration, and spillage of process solid and liquid wastes and by-products generated during coal and oil gasification processes. The site has been identified as a "state lead" site since July 2000 and is classified under the MCP as a Tier 1B (no direct state oversight) site in phase IV of site investigation and cleanup. An EPA contractor completed a site assessment at this site in 1996.

This site was included in the GAO report of sites awaiting NPL decisions, and is not a RCRA corrective action site.

Needham

Microwave Development Labs MAD001004092

Microwave Development Labs (MDL) is an active facility designing and manufacturing radar devices. It is located on a 2.4 acre parcel of land with a long industrial history dating back to the 1800s. Releases of hazardous wastes have occurred on-site and at least two groundwater plumes of VOC contamination have been identified that threaten area drinking water supplies. VOCs have also been detected in Rosemary Brook. The site has been identified as a "state lead" site since July 2000, and is classified as a Tier 1A (direct state oversight) site in phase III of assessment by the state. EPA is providing technical assistance to the state in the use of groundwater modeling and a permeable reactive barrier to address the TCE plumes. EPA completed a site assessment in 1996.

This site was included in the GAO report of sites awaiting NPL decisions, and is not a RCRA corrective action site.

North Reading

MSM Industries MAD001072461

The 3.3-acre site has been used since 1968 for sheet metal fabrication. Releases from the facility have resulted in a groundwater plume of VOCs, and soils and wetlands are contaminated with site-related chemicals. The Ipswich River flows within 100 feet of the site, but does not show signs of contamination from the site. MA DEP is overseeing implementation of an interim remedial measure (groundwater recovery and treatment) to minimize off-site migration of the contamination. The site has been identified as a "state lead" site since July 2000, and is classified as a Tier 1A (high priority, direct state oversight) site under the MCP, and is currently in phase III of site investigation and cleanup. EPA completed a site assessment in 1997.

The site was included in the GAO report of sites awaiting NPL decisions, and is not a RCRA corrective action site.

Seekonk

Former Rhubarb Farm MAD980910137

The site was used to dispose of sludge containing pesticides, polychlorinated biphenyls, volatile organic compounds, and semi-volatile organic compounds. DEP believes that cadmium, chromium and toluene detected in the soil at the former farm may pose public health threat. The state may request EPA's assistance since the Potentially Responsible Party appears to be financially unable to conduct response actions.

The site was included in the GAO report of sites awaiting NPL decisions, and is not a RCRA corrective action site.

Waltham

Waltham Industrial Labs MAD001014927 (3-0585)

This site is located in the back portion of an active manufacturing building, in a residential area. The former electroplater occupied 23,500 square feet of the first and basement floors of what had been the Waltham Watch building. The building has been used by several manufacturing companies since 1854. Wastes consisted of rinse waters, acids, alkaline cleaners and plating solutions. Contamination has been detected in the building, in soils and in the Charles River. The site is designated as a "state lead" site by the federal Superfund program. EPA completed a site assessment in 1997.

This site was included in the GAO report of sites awaiting NPL decisions. It is not a RCRA corrective action site.

Weymouth

Weymouth Neck MAD985277870 and MAD980909543

The site was a former fertilizer plant which operated on Weymouth Neck from 1861 until 1966. A NIKE missile launcher facility was located on-site in the 1950s until the1970s. The property has subsequently been redeveloped, and now includes William Webb Memorial State Park, two condominium complexes, and three undeveloped lots. Wastes associated with the fertilizer operations are documented on-site, along with groundwater, soil, and sediment contamination. This site has been the focus of considerable community interest and concern. The central portion of the Neck is a Tier 1A (direct state oversight) site under the MCP and the Webb State Park portion was cleaned up by the state. However, it was discovered during EPA sampling on Webb State Park that one of the capped areas has significantly eroded. DEM has agreed to perform sampling on Webb State Park to assess the need for further remedial actions. EPA has performed additional sampling of adjacent properties to determine the extent of contamination. The site is designated as a "state lead" site by the federal Superfund program.

The site was not included in the GAO report of sites awaiting NPL decisions, and is not a RCRA corrective action site.

Wilmington

Olin Chemical Co. MAD001403104

The Olin Chemical site is a Tier 1A site under the Massachusetts Contingency Plan site classification system. It consists of a 53-acre parcel owned by Olin, and a large groundwater plume that extends from the Olin property into the Maple Meadow Brook Aquifer, which supports five water supply wells for the town of Wilmington. The Olin site also includes contaminated sediments in a ditch system that transports surface water from the site into the Aberjona River watershed. The site is contaminated primarily from process wastewaters that were discharged into unlined lagoons from the 1950s until the 1970s. The main constituents of the contaminant plume are ammonia, sulfates, chloride, chromium, and sodium. The manufacturing operations ceased in 1986. Olin has funded extensive studies of the contamination since that time, and has taken some remedial measures, including a groundwater pump-and-treat system to clean up an area of oil spillage, and excavations to clean up the sediments in the on-site ditches and to remove buried drums. A landfill for the disposal of calcium sulfate wastes also exists on the Olin property, and has been capped. This is a "state lead" site with direct supervision by a DEP project manager due to its status as a Tier 1A site.

EMERGENCY PLANNING AND RESPONSE PROGRAM

EPA New England's Emergency Planning and Response program prepares for, and responds to oil and chemical spills to the environment, and supports and supplements local, state, and private parties' efforts to address emergencies. In case of a chemical or biological threat or emergency, EPA has developed a detailed emergency response plan, a summary of which is in the Homeland Security section of this report.

EPA also oversees short-term cleanups across New England. Short-term cleanups, called "removal actions," reduce immediate threats to public health and the environment at sites that are typically less complex to cleanup than sites on the National Priorities List. (A description of the Superfund NPL program begins on page 18) Short-term cleanups may take anywhere from a few days to a few years to complete, depending on the type and extent of contamination.

An emergency occurs when hazardous or toxic chemicals are released into the environment causing potential health or environmental risks. EPA may need to respond within hours of the event.

Time-Critical Actions are those cleanups where, based on an evaluation of the site, EPA determines that on-site cleanup activities must be initiated within six months of determining that a short-term cleanup is appropriate. For time-critical actions, EPA conducts an investigation of the contamination and produces an "action memorandum" authorizing and outlining the cleanup process before beginning work.

Examples of the types of situations where EPA may be asked to respond immediately include those involving a fire, explosion or imminent, catastrophic contamination of a drinking water reservoir. In cases where an abandoned property has been identified with drums of toxic chemicals left behind, EPA may still assist in the cleanup but the timetable need not be as immediate. The following pages describe EPA's cleanup activities at non-NPL sites during 2002.

EPA's security and response readiness plan, discussed beginning on page 6 seeks to prepare the agency for the worst. In 2002, EPA hired five additional On-Scene Coordinators; provided extensive training to all staff to increase the level of preparedness to respond to an event; assisted municipalities and water districts across New England to reduce the vulnerability of public water supply systems; offered security awareness information to industrial facilities, pipeline owners, transporters, utilities, and warehousers of chemicals throughout New England; and improved plans to allow EPA to continue operation in an alternate location.

Cumulative Total Federal Superfund Dollars Expended at non-National Priorities List Sites in New England, 1980-2002

CT $67 million
MA $58.8 million
ME $28.3 million
NH $31.2 million
RI $12.9 million
VT $ 2.1 million
TOTALS: **$200.3 million**

Source: EPA New England, January 1, 2003

For further information on EPA New England's oil and chemical emergency response programs, visit our web site at www.epa.gov/ne/superfund/er/erindex.htm.

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Following are a few "Fast Facts" about EPA's Emergency Response Program in Massachusetts:

- Since 1983, EPA has completed **168** short-term cleanups ("removal actions" in Massachusetts, including **nine (9)** during 2002. **Six** other removal projects were ongoing in the state during 2002.

- EPA has spent **$58.8** million on-site assessment, investigation, and cleanup at non-National Priorities List sites in Massachusetts.

- Short-term cleanups at non-NPL sites in Massachusetts have removed over:
  350,000 gallons of liquid waste
  13,000 tons of debris
  8,000 tons of solid waste
  60,000 tons of contaminated soils and sludges

- Since 1992, EPA has managed **16** oil spill cleanups in the state, valued at approximately **$2.2** million.

Source: EPA New England, January 1, 2003

Following is a summary of Massachusetts Superfund Emergency Response activities for 2002. For more information on short-term cleanup sites in New England, visit www.epa.gov/ne/superfund/sites

Grafton

Fisherville Mill

The 16.2-acre Fisherville Mill, at 60 Main Street (Route 122A), Grafton, was used from 1882 until 1986 by different industries for textile production, steel parts manufacturing, and warehouse storage. The site was contaminated with petroleum, chlorinated volatile organic compounds, asbestos, and heavy metals and had been undergoing a state-led cleanup. Following a multiple-alarm fire in 1999 which destroyed the entire complex, state, federal and local agencies cleaned up debris and surface contamination. Volatile organic compounds (primarily TCE) are present in the groundwater at the site threatening the nearby municipal drinking water supply wells. EPA has been developing a cleanup plan for addressing groundwater contamination including installing a portable dam, conducting treatability study utilizing in-situ chemical oxidation treatment technology and implementing the treatment technology.

Response Began: May 2002
Response Completed: Ongoing
Superfund $$ Spent: $2,682,209

New Bedford

Polymerine

This eight-acre parcel of land is located in the New Bedford Industrial Park. EPA conducted a Preliminary Assessment/Site Investigation (PA/SI) in November 1997 that indicated PCBs as high as 13,000 parts per million in surface soil in the rear of the facility. In June 1998, EPA issued an Unilateral Administrative Order (UAO) to the potentially responsible party (PRP) who hired a contractor to excavate approximately 220 tons of PCB-contaminated soil. The contaminated soil was staged in the facility parking lot. Because the PRP failed to complete cleanup activities and defaulted on the UAO, EPA initiated a time-critical removal action in the spring of 2001 to complete the excavation and disposal of the contaminated soil.

Response Began: October 1998
Response Completed: October 2001 (fiscal year 2002)
Superfund $$ Spent: $1,172,104
Wastes Removed: 2,000 tons of
PCB contaminated soil

Taunton

Route 44 Disposal Area

The Route 44 Disposal Area is located at 354 and 356 Winthrop Street (which is also designated as State Route 44) in Taunton. EPA discovered deteriorated drums containing volatile organic compounds in concentrations as high as 4,900 parts

per million in three test pits. EPA constructed a temporary building and air treatment system to control airborne hazardous substances associated with excavating the drums for disposal. Between mid-June and October 2001, EPA excavated 839 drums, and approximately 340 cubic yards of contaminated soil and crushed, empty drums. While doing the excavation, EPA found evidence that identified the company which Z generated and shipped waste to the site and in late 2001 EPA entered into an agreement with the company to finish the cleanup, saving the EPA millions of dollars in Superfund money. The company completed the excavation of 1,359 drums by October 2002. Where testing revealed the drum waste to be similar to the surrounding contaminated soil, drums were cut up with hydraulic shears and included with the soil.

Response Began: September 2000
Current Status: Ongoing
Superfund $$ Spent: $1,316,181
Wastes Removed: 3069 tons of contaminated soil
and sheared drums

Taunton

St. Germain Drums

EPA identified more than 1,000 drums at the St. Germain Drum Site, located at 340 to 350 Winthrop Street in Taunton. Drums contained flammable waste and volatile organic contaminants at concentrations exceeding10,000 parts per million. Based on evidence gathered while excavating the drums, EPA negotiated with the company that generated and shipped waste to the site to complete the project, saving millions of Superfund dollars.

Response Began: December 1999
Response Completed: July 2002
Superfund $$ Spent: $864,271
Wastes Removed: 3305 drums of hazardous substances
120 cubic yards of crushed, empty, contaminated drums
11,407 tons of contaminated soil and sheared drums
194,119 gallons of groundwater treated on-site
47,000 gallons of contaminated groundwater treated off-site

Taunton

Taunton River Enhancement Project

The site consisted of four lagoons containing tannery waste on 2.5 acres of a larger parcel owned by the city of Taunton along the east side of the Taunton River. Geilch and Reuping East Tannery on West Water Street used the lagoons for twenty years to dispose of chromium wastes. EPA identified highly contaminated soils which were disposed of at an off-site facility. The site was regraded and seeded and is being maintained by the city.

Response Began: July 1998
Response Completed: May 2002
Superfund $$ Spent: $1,632,988
Wastes Removed: 12,025 cubic yards of solid waste

Tewksbury

Sutton Brook Disposal Area

State and federal environmental agencies discovered a drum disposal area at the 100-acre former Rocco's Landfill at 1069 South Street in Tewksbury, near the Wilmington border. EPA found high levels of volatile and semi-volatile organic compounds in the drums and soil and has since excavated and disposed of soil, drums and containers. EPA removed 10,050 tons of soil contaminated with volatile and semi-volatile organic compounds, 101 drums of flammable organic solids, and four rolloff boxes containing drum parts, used PPE, and debris. EPA issued an order to twelve potentially responsible parties to dispose of an additional 3,735 tons of contaminated soil which remained stockpiled on the site after EPA's portion of the removal work was completed. This site is listed on the National Priorities List. For more information on this cleanup, see: www.epa.gov/ne/superfund/sites/suttonbrook

Response Began: July 2000
Response Completed: April 2002
Superfund $$ Spent: $1,460,000
Wastes Removed: 13,785 tons of soil contaminated with volatile and semi-volatile organic compounds
101 drums of flammable organic solids
4 roll off boxes containing drum parts, used PPE, and debris

Wellesley

Morses Pond Culvert

The outlet of Morses Pond in Wellesley flows through a 200 foot-long culvert which passes under the MBTA railroad and State Highway 135 before discharging into Paintshop Pond downstream. High levels of total chromium (up to 129,000 parts per million and hexavalent chromium (up to 31,000 ppm) were found on the railroad embankment and on the level areas next to the pond. Chromium was found in the bottom of the cove and in the culvert itself. The source of the contamination is believed to have been the former Henry Woods Paint Company which operated near Paintshop Pond until approximately 1900, when it burned down. Chromium-laden pigment wastes may have been taken from the former paint factory and imported as fill material when improvements were made to the railroad embankment around the culvert. EPA installed a sheet pile coffer dam and a bypass pumping system to dewater the cove, removed contamination from the culvert and cove, and excavated contaminated surface soils. Contaminated surface soils adjacent to the wing walls of the culvert could not safely be excavated and were treated in place to reduce the toxicity and mobility of the contamination. This innovative treatment process involved injecting a calcium polysulfide reagent into the soil, causing a reaction which converted the hexavalent chromium into trivalent chromium. Work crews installed a low-permeability cap over areas where deeper soil contamination remains and restored the excavation areas.

Response Began: October 2000
Response Completed: August 2002
Superfund $$ Spent: $3,289,079
Wastes Removed: 1,655 cubic yards of contaminated sediment
770 cubic yards of contaminated soil

MASSACHUSETTS

Woburn

A-1 Precious Metal Plating

The A-1 Precious Metal Plating, Inc. site is located in an industrial park at 36 Sixth Road in Woburn. The facility was the subject of numerous Massachusetts Water Resources Authority (MWRA) enforcement actions. In August 2000, A-1 was evicted from their facility. The MWRA notified EPA that hazardous materials from the plating operations had been left at the facility. EPA found strong acids, strong bases and cyanide in tanks and drums; hydrogen cyanide in the air; and approximately 100 drums and 600 small containers. Containers labeled as hazardous substances included: hydrofluoric acid, nitric acid, hydrochloric acid, fluoboric acid, hydrogen cyanide, silver cyanide, zinc cyanide, potassium cyanide, copper cyanide, sodium hydroxide, potassium hydroxide and hydrogen peroxide. Under an EPA order, the Sixth Avenue Realty Trust, property owners, hired contractors to consolidate laboratory and small chemical bottles, and overpack and stage all of the drums for future off-site disposal.

Response Began: September 2001
Response Completed: March 2002
Superfund $$ Spent: $50,390

Worcester

Barstow

This 1 ½-acre site is an abandoned metal plating facility located at 722 Plantation Street in Worcester. EPA visited the site in May 2001 and found approximately 100 containers ranging in size from 55 gallon drums to) One-gallon pails containing acids and caustics, metal solutions (acids, sludges), alkaline, and flammable lab packs, unknown liquid and solids, and other diverse chemicals. Large portions of the interior concrete floor, and soil under what used to be plating vats, were also visibly contaminated. A number of troughs and vats, some empty and some with product, had rotted through and possibly contaminated the ground underneath. There were also five dilapidated roll-off containers staged on the property that were filled with debris from previous cleanup activities. EPA packaged wastes for off-site disposal.

Response Began: August 2001
Response Completed: March 2002
Superfund $$ Spent: $303,870
Wastes Removed: 6,700 pounds of solid hazardous waste
5,300 gallons of liquid hazardous waste
100 pounds of mercury solids for recycling

Taunton

Oak Street

Located on Oak Street between Anderson and Highland Streets in Taunton, this one-acre vacant lot was used for the disposal of solid waste until the late 1980s. Undocumented amounts of fill, construction debris, asphalt, scrap metal, and drums containing hazardous substances including toluene and trichloroethylene were disposed of at the site. Although a chain-link fence running along Oak Street

prevents cars and other vehicles from entering the site, pedestrian access is not restricted. EPA, the city of Taunton and Massachusetts DEP are working cooperatively to remove the buried drums. EPA and its contractors have prepared the site for drum recovery operations, and began excavation work. Drums will be excavated, sampled, and overpacked before being transported off-site for disposal at a permitted facility. Highly contaminated soils from where the drums are being excavated will be sampled and stockpiled before also being transported off-site for disposal at a permitted facility.

Response Began: June 2002
Current Status: Ongoing
Superfund $$ Spent: $204,943
wastes removed: 2 drums

Witchcraft Heights

The city of Salem, while building a new access road as part of major renovations at the Witchcraft Heights Elementary School, found arsenic and chromium-contaminated material which is believed to have been dumped on the property by a former tannery prior to the school's construction. EPA has taken soil samples from 41 nearby residential properties and will continue sampling. The agency has begun excavation and disposal of arsenic-contaminated soil at five properties where concentrations are in excess of state standards. EPA anticipates that it will clean up and re-landscape 20 residential properties.

Response Began: September 2002
Current Status: Ongoing
Superfund $$ Spent: $399,225

Southampton

Former Mr. Stripper

Mr. Stripper is a five-acre parcel located at 6 Coleman Road in a residential neighborhood in Southampton. The property had primarily been used from the early 1970s to 1987 for furniture paint stripping operations. EPA identified six waste storage drums in poor condition as well as several small containers of furniture stripping products. Samples revealed that the drums and containers contain methylene chloride, pentachlorophenol, and toluene which all pose a risk to the environment should they leak. EPA ordered the responsible parties to transport all of the hazardous substances and wastes off-site for disposal at a licensed facility.

Response Began: November 2001
Response Completed: September 2002
Superfund $$ Spent: $11,989
Wastes Removed: 185 Gallons of liquid waste

MASSACHUSETTS

Rockland

Estes Auto Supply

This site, located is an industrial / commercial property at 225 West Water Street in Rockland, operated between 1949 and the early 1990s as an auto supply company. It conducted engine repairs, autobody painting, general automotive repair services and sold automotive parts. EPA removed several unlabeled 55-gallon drums and small containers of hazardous materials as well as surface soils containing elevated levels of lead and methylene chloride. A few hundred one-gallon containers with flammable liquids were removed and disposed at an off-site disposal facility. Approximately 300 cubic yards of lead and methylene chloride contaminated soils were shipped off-site for disposal.

Response Began: November 2001
Response Completed: April 2002
Superfund $$ Spent: $162,549
Wastes Removed: 745 gallons of liquid waste
301 cubic yards of solid waste

Norwood

Zimble Drum

This 13-acre property, which includes four one-story buildings located at 61 Endicott Street in Norwood, is a defunct scrap metal/metal recycling facility. There have been three small fires set on the site and neighbors have repeatedly called Norwood officials to report trespassers in and around the buildings. The building fire suppression system is no longer in operation. At the request of the town of Norwood, EPA investigated the site and identified various chemicals on the site, in surface soil, and in assorted containers. EPA found approximately 100 containers, including 55-gallon drums and cylinders which were potentially full and pressurized, 100 containers scattered throughout the four buildings and eight capacitors with 'Pyranol' labels, indicative of containing a mixture of mineral oil and PCBs. EPA observed stained floors in all of the buildings indicating that some of the containers had leaked. EPA plans to sample and dispose of the hazardous materials at a permitted facility off-site.

Response Began: October 2002
Current Status: Ongoing
Superfund $$ Spent: $34,958

Peabody

Monnier

This 6.7-acre site at 60 Pulaski Street in Peabody, is the former location of several manufacturing companies which sold tanning chemicals and dyestuffs from 1944 to 1993. After a fire that destroyed the building, EPA sampled debris and found it contaminated with asbestos. EPA packed the material and disposed of it at a licensed facility.

Response Began: November 2002
Response Completed: December 2002
Superfund $$ Spent: $522,469
Wastes Removed: 496 cubic yards of
asbestos-contaminated building debris

Baldwinville

Temple-Stuart

The Temple-Stuart site, located in a residential neighborhood on Holman Street in Baldwinville, is a 23-acre property which consisted of five abandoned buildings and an abandoned garage. The Temple-Stuart Company, which occupied the site from 1910 to 1993, manufactured wooden furniture. EPA's initial evaluations found the buildings to be dilapidated, unsafe and inaccessible for hazardous waste and asbestos removal in many areas. The floors were collapsing, and the once boarded-up windows had been uncovered. EPA also found evidence of vandalism and trespassing. Sampling confirmed friable asbestos inside and outside the buildings. Additional sampling found friable asbestos-containing material, containerized waste material, and PCB-contaminated surface soils. In addition, underground storage tanks and aboveground storage tanks were found on-site. Friable asbestos was removed from safe building areas, and EPA is demolishing most of the building complex to make it possible to remove the remaining asbestos and hazardous materials.

Response Began: August 2002
Current Status: Ongoing
Superfund $$ Spent: $273,629

Concord

Nuclear Metals, Inc.

The Nuclear Metals, Inc. site was listed on the NPL on June 14, 2001. It is located on 46.5 acres in Concord and was a research and manufacturing facility contracted by the U.S. Army to produce depleted uranium-tipped bullets. It ceased manufacturing the penetrators for the military in 1999. As part of the long term cleanup of the site, EPA addressed the hazardous substances, pollutants and contaminants present in drums and in surface and subsurface soils, by installing fences, constructing temporary land covers over two soil areas that had been identified to be contaminated with hazardous substances, as well as removing and disposing hazardous wastes unearthed during the temporary cover construction activities.

Response Began: July 2002
Current Status: Ongoing
Superfund $$ Spent: $971,000

EPA NEW ENGLAND BROWNFIELDS: RESTORING COMMUNITIES

Environmental contamination can rob a community of its economic potential and its social structure even when contamination is not severe enough for a Superfund designation. Any amount of contamination - or even the perception of possible contamination – can prevent the use of valuable property. Across New England, hundreds of properties are abandoned or underused because of the fear of environmental contamination, a contamination that may not even exist. And at the same time these sites are left unused, development is consuming valuable open space elsewhere. Although such idle properties, called brownfields, are usually urban warehouses or abandoned factories, they can also be found in rural areas. When mines are abandoned or fields host illegal dumping, the value of the property can plummet.

EPA New England's Brownfields program provides solutions by helping communities restore the value to these abandoned sites. The program focuses on providing grants and services to help communities assess contamination, plan for new uses, and clean sites to ready them for redevelopment. Since 1995, the Brownfields program has distributed more than $56 million to dozens of communities, states, and agencies around the region.

In January 2002, EPA significantly increased its spending on brownfields through the Small Business Liability Relief and Brownfields Revitalization Act, Public Law 107-118. The law lets communities use grants to clean sites, provides new liability protections for prospective purchasers and greatly enhances state and tribal programs, which continue to play a critical role in restoring and revitalizing Brownfields.

The EPA New England brownfields program includes:

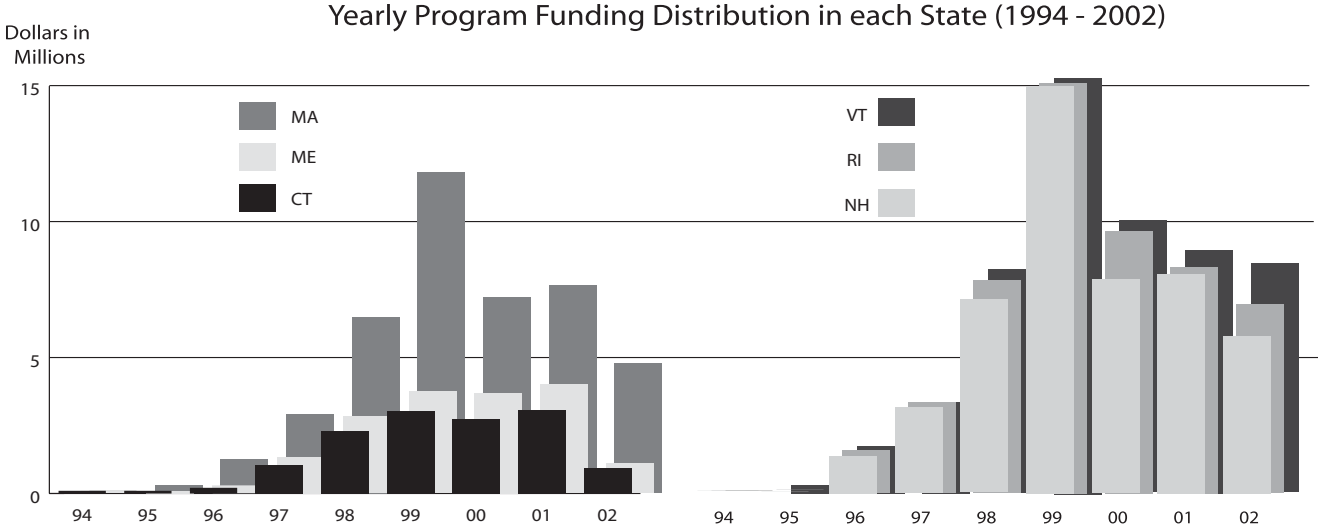
- Grants for assessing and cleaning up sites
- Site assessments carried out by EPA and/or states for communities
- Job training grants
- Showcase Community designations that bring with them a full-time EPA staffer working on Brownfields in the community.
- Grants to establish revolving loan funds for Brownfields cleanup

More details about EPA New England's Brownfields program and many success stories are contained in the publication: *Land and Community Development: Brownfields*.

What are Brownfields?

Brownfields are real property, the expansion, redevelopment or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.

Yearly Program Funding Distribution in each State (1994 - 2002)



Source: EPA New England, January 1, 2003

Source: EPA New England, January 1, 2003

BROWNFIELDS REDEVELOPMENT PROVIDE OPPORTUNITIES

For years, contaminated and potentially contaminated properties around New England have sat idle and unused, stark demonstrations of the environmental damage progress can cause. But recently, turnarounds have been made possible by the federal Brownfields program.

In New London, Connecticut, one acre of a former railroad yard on the Thames River that sat deteriorating has been taken over by the city and combined with other properties to make way for a popular waterfront boardwalk that opened last year. The project is part of a comprehensive plan to open the city back up to the waterfront and take advantage of its recreational and educational resources.

In Massachusetts, 200 industrial acres in the Mystic River Valley north of Boston that sat deteriorating for decades are being cleaned and redeveloped to bring jobs, energy and green space back to an area that once served as the center of the region's economy. TeleCom City, a project involving three communities, will include 1.8 million square feet of office, laboratory and manufacturing space, as well as 200 units of housing and 60 acres of designated green space.

In Providence, Rhode Island, abandoned mill buildings and properties along the Woonasquatucket River in Providence are being cleaned up and readied for neighborhood parks that will eventually be linked to a 4.4-mile linear park and bike trail known as the Woonasquatucket River Greenway. Among the lynchpins of the Greenway project are the Riverside Mills and Lincoln Lace and Braid properties, two riverfront eyesores that are well on their way to being restored.

A burned-out building at the Manchester Airport in Londonderry, New Hampshire for years sat abandoned and empty of anything but hundreds of unidentified chemicals that had been packaged and stored on the site for much of the 1980s and 1990s. The five-acre property, which had been owned most recently by a chemical products company before it went bankrupt in 1994, has been cleaned of storage tanks, chemicals and contaminated oil and redeveloped for Enterprise Rent-a-Car's regional distribution center. The project is an important part of a major expansion project by the Manchester Airport Development Authority.

These turnarounds are just a few of the many success stories seen around New England as the eight-year-old federal Brownfields program bears fruit. Since 1995, EPA New England has provided more than $56 million of Brownfields assistance—for grants, site evaluations, job training and cleanup loan programs—to dozens of communities, states and agencies around the region. The assistance has led to 630 completed site assessments, more than 100 cleanups that are underway or completed and thousands of new jobs. By targeting development to these sites, the assistance also is protecting precious open space from new development.

Emboldened by the success and huge popularity of the program, President Bush and Congress enacted new Brownfields legislation this year that substantially increased the funds available for Brownfields work – boosting annual funding to roughly $167 million a year—and make more properties eligible for cleanups. The new law will greatly expand financial assistance to public entities and nonprofit groups for Brownfields revitalization, including grants for assessments, loans, cleanups and job training. It also provides new liability protections for prospective purchasers and greatly enhances state and tribal programs, which continue to play a critical role in restoring and revitalizing Brownfields.

Guidelines that were recently approved as part of the new legislation include various new precedents including: broadening the eligibility for funding to include sites with petroleum

contamination; providing cleanup grants to eligible entities, including nonprofit organizations that own property they wish to clean up; and allowing local governments to use up to 10 percent of the funds for monitoring the health of local populations exposed to hazardous wastes.

In October 2002, nearly 200 representatives from cities, towns, state agencies, tribes, nonprofit groups and consulting firms attended meetings in Massachusetts and New Hampshire to learn about the new legislation and upcoming funding opportunities for public entities and nonprofit groups. Based on feedback at these meetings, we expect to see many exciting projects move forward in the months ahead.

Information on financial assistance that is available can be found at www.epa.gov/ne/brownfields

SUPERFUND GLOSSARY OF TERMS

There are many terms and acronyms specific to the Superfund program that you may not recognize. This glossary defines both terms and acronyms to ensure that the information provided in this document is easy to understand for everyone.

Action Memorandum
A document authorizing and outlining the cleanup plan that will be followed as part of a short-term cleanup.

Acute Exposure
A single exposure to a hazardous material for a brief length of time.

Administrative Record
A compilation of documents supporting an administrative action; under Superfund, administrative actions often compel Potentially Responsible Parties (PRPs) to undertake or pay for hazardous waste site cleanups.

Advection
Transportation of contaminants by the flow of a current of water or air.

Agency for Toxic Substances and Disease Registry (ATSDR)
An agency of the U.S. Department of Health and Human Services whose purpose is to prevent exposure and adverse human health effects and diminished quality of life associated with exposure to hazardous substances from waste sites, unplanned releases, and other sources of pollution present in the environment.

Aquifer
An underground geological formation, or group of formations, containing water; sources of groundwater for wells and springs.

Benthic
Relating to or occurring at the bottom of a body of water.

Bioaccumulation
The storage and buildup of chemicals in wildlife and plants. This process can take place in one of two ways: through direct consumption of chemicals, or when one organism consumes another that has already consumed these chemicals. The second method contributes to the level of these substances in the organism that is higher on the food chain.

Carcinogen
A substance or agent that may produce or increase the risk of cancer.

Chronic Exposure
Continuous or repeated exposure to a hazardous substance over a long period of time.

Clean Air Act (CAA)
A federal law that gives EPA authority to set standards for air quality and to control the release of airborne chemicals from industries, power plants, and cars.

Clean Water Act (CWA)
A federal law that regulates the pollution that will reach surface waters (rivers, lakes, ponds, and streams). The law prohibits a point source from discharging pollutants into the water unless the discharge meets certain permit requirements.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
A federal law, enacted in 1980 and nicknamed "Superfund," that provides the authority through which the federal government can compel people or companies responsible for creating hazardous waste sites to clean them up. It also created a public trust fund, known as the Superfund, to assist with the cleanup of inactive and abandoned hazardous waste sites or accidentally spilled or illegally dumped hazardous materials.

Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)
A database that supports EPA headquarters and regional implementation of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 and the Superfund Amendments and Reauthorization Act (SARA) of 1986. It contains information on site inspections, preliminary assessments, remedial information, and emergency and non-emergency cleanup activities for all hazardous substance/waste sites evaluated under the Superfund program, including federal facilities. In addition, CERCLIS contains information about all potential Superfund sites, as well as "Proposed" and "Final" sites that have been listed on the National Priorities List (NPL).

Concentration
The amount of a chemical in a given volume of air, water, or other medium. An example is 15 parts of carbon in a million parts of air.

Contaminant
Harmful or hazardous matter introduced into the environment.

Contaminant Level
A measure of how much of a contaminant is present.

Corrective Action
Cleanup of hazardous waste contamination at non-Superfund sites. See also Resource Conservation and Recovery Act (RCRA).

Dense Non-Aqueous Phase Liquid (DNAPL)
Liquid contaminants that are relatively insoluble and heavier than water; also known as sinkers because they will sink to the bottom of an aquifer, where they become especially difficult to detect and clean up.

Ecosystem
A specialized community, including all the component organisms, that forms an interacting system; for example, a marsh, a shoreline, a forest.

Emergency Planning and Community Right-to-Know Act (EPCRA)
A federal law, also known as SARA Title III, that was enacted in November 1986. This law provides an infrastructure at the state and local levels to plan for chemical emergencies. Facilities that store, use, or release certain chemicals may be subject to various reporting requirements. Reported information is then made publicly available so that interested parties may become informed about potentially dangerous chemicals in their community.

Emergency Response
A response action to situations that may cause immediate and serious harm to people or the environment.

Engineering Evaluation/Cost Analysis (EE/CA)
A study conducted as part of a non-time critical short-term cleanup. The EE/CA identifies the objectives of the cleanup and analyzes various cleanup alternatives in terms of cost, effectiveness, and ease of implementation. The EE/CA is made available for public review and comment, prior to the publication of an action memorandum, which outlines the selected cleanup method.

Epidemiology
Study of causes of disease or toxic effects in human populations.

Exposure
Coming into contact with a substance through inhalation, ingestion, or direct contact with the skin; may be acute or chronic.

Explanation of Significant Differences (ESD)
A document which outlines significant changes to a remedy selected in a Record of Decision (ROD) with respect to scope, performance, or cost.

Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)
A federal law that requires labels on pesticides that provide clear directions for safe use; FIFRA also authorizes EPA to set standards to control how pesticides are used.

Five-year Review
A periodic review of site conditions, data, land use, etc., to ensure that cleanup actions remain protective of human health and the environment.

Food Chain
The sequence of transfers of energy in the form of food from one organism to another when one organism eats or decomposes another organism.

Groundwater
Water found beneath the Earth's surface that fills pores between materials, such as sand, soil, or gravel.

Hazard Ranking System (HRS)
The method EPA uses to assess and score the hazards posed by a site that takes into account the nature and extent of contamination and the potential for the hazardous substances to migrate from the site through air, soil, surface water, or groundwater; HRS scores are used to determine whether a site should be placed on the National Priorities List (NPL).

Hazardous Substance
A broad term that includes all substances that can be harmful to people or the environment.

Hazardous Waste
By-products or waste materials of manufacturing and other processes that have some dangerous property; generally categorized as corrosive, ignitable, toxic, or reactive, or in some way harmful to people or the environment.

Health Risk Assessment
Scientific evaluation of the probability of harm resulting from exposure to hazardous materials.

Heavy Metals
Metals such as lead, chromium, copper, and cobalt that can be toxic at relatively low concentrations.

Information Repository
A set of information, technical reports, and reference documents regarding a Superfund site; it usually is located in a public building that is convenient for local residents, such as a public school, city hall, or public library.

Innovative Treatment Technologies
New and creative methods used to effectively treat hazardous waste.

Inorganic Compounds
Molecules that consist of chemical combinations of two or more elements that are not carbon, hydrogen, oxygen, or nitrogen.

Liability
Under Superfund, a party responsible for the presence of hazardous waste at a site is also legally responsible for acting and paying to reduce or eliminate the risks posed by the site.

Light Non-Aqueous Phase Liquid (LNAPL)
Liquid contaminants that are relatively insoluble and lighter than water; also known as floaters because they will float on top of an aquifer.

Long-term Cleanup
A response action that eliminates or reduces a release or threatened release of hazardous substances that is a serious but not an immediate danger to people or the environment. This action, also known as a Remedial Action (RA), may take years to complete.

Migration
The movement of a contaminant from one place to another.

Migration Pathways
The routes a contaminant may move around in the environment (e.g., soil, groundwater, surface water, air).

Monitoring Well
A well drilled at a hazardous waste management facility or Superfund site to collect groundwater samples for analysis to determine the amounts, types, and distribution of contaminants in the groundwater beneath the site.

Municipal Solid Waste
Garbage that is disposed of in a sanitary or municipal solid waste landfill.

Mutagenic
Causing alteration in the DNA (genes or chromosomes) of an organism.

National Institute of Environmental Health Sciences (NIEHS) Superfund Basic Research Program
Provides funding to 18 programs at 70 universities and institutions around the United States to study the human health effects of hazardous substances in the environment, especially those found at uncontrolled, leaking, waste disposal sites.

National Oil and Hazardous Substances Pollution Contingency Plan (NCP)
The federal government's blueprint for responding to both oil spills and hazardous substance releases. The NCP is the result of efforts to develop a national response capability and promote overall coordination among the hierarchy of responders and contingency plans.

National Priorities List (NPL)
EPA's list of the most serious uncontrolled or abandoned hazardous waste sites, identified as candidates for long-term cleanup using money from the Superfund trust fund.

Non-time Critical Removal Actions
A type of short-term cleanup in which, based on an evaluation of the site, EPA determines that more than six months is available before on-site activities must begin. A non-time-critical action includes a more extensive study of the contamination and cleanup options, called an Engineering Evaluation/Cost Analysis (EE/CA), and more formal public participation prior to the publishing of an action memorandum authorizing and outlining the cleanup plan.

Occupational Safety and Health Act (OSHA)
A federal law that sets minimum health and safety standards for the workplace. Private employers must protect their employees by following OSHA requirements.

Office of Site Remediation and Restoration (OSRR)
The EPA New England office that oversees the following programs: Superfund, Brownfields, Oil Spill, RCRA Corrective Action, and Underground Storage Tanks.

Oil Pollution Act (OPA)
A federal law that was signed into law in August 1990, largely in response to rising public concern following the Exxon Valdez incident. The OPA improved the nation's ability to prevent and respond to oil spills by establishing provisions that expand the federal government's authority, and provide the money and resources necessary, to respond to oil spills. The OPA also created the national Oil Spill Liability Trust Fund, which is available to provide up to one billion dollars per spill incident.

Operable Unit (OU)
The cleanup of a site can be divided into a number of operable units, depending on the complexity of the problems associated with a site. Operable units may address geographical portions of a site, specific site problems, or initial phases of an action, or may consist of any set of actions performed over time or any actions that are concurrent but located in different parts of a site.

Operation and Maintenance (O&M)
Activities that protect the integrity of the selected remedy for a site. O&M measures are initiated by a state after the remedy has achieved the Remedial Action (RA) objectives and remediation goals outlined in the Record of Decision (ROD), and is determined to be operational and functional (O&F) based on state and federal agreement.

Organic Compounds
Molecules that typically contain carbon, hydrogen, oxygen, or nitrogen.

Percolation
The movement of water downward and radially through subsurface soil layers, usually continuing downward toward groundwater.

Permeability
The degree to which groundwater can move freely through an aquifer.

Pesticide
Any chemical used to kill or control undesired insects, weeds, rodents, fungi, bacteria, or other organisms. Some pesticides are known to cause cancer.

Plume
A body of contaminated groundwater flowing from a specific source. The movement of the groundwater is influenced by such factors as local groundwater flow patterns, the character of the aquifer in which groundwater is contained, and the density of contaminants.

Point Source
A stationary location or fixed facility from which pollutants are discharged; any single identifiable source of pollution; e.g., a pipe, ditch, ship, ore pit, factory smokestack.

Polychlorinated biphenyls (PCBs)
A group of toxic chemicals used for a variety of purposes including electrical applications. PCBs are known to cause cancer in animals. PCB use and sale was banned in 1979 with the passage of the Toxic Substances Control Act (TSCA).

Potentially Responsible Parties (PRPs)
Any individual or company who may have contributed to contamination at a Superfund site. Under CERCLA, PRPs are expected to conduct or pay for site cleanup.

Preliminary Assessment (PA)
The process of collecting and reviewing available information about a known or suspected hazardous waste site or release that is used to determine if the site requires further study.

Proposed Plan
A Superfund site cleanup strategy prepared by EPA that is subject to public comments.

Reactive
One of four categories of hazardous waste; substances capable of changing into something else in the presence of other chemicals, usually violently or producing a hazardous by-product.

Recharge Areas
Area in which an aquifer is replenished with water by the downward percolation of precipitation through soil and rock.

Record of Decision (ROD)
A public document that explains which cleanup alternatives will be used to clean up a Superfund site. The ROD for sites listed on the National Priorities List (NPL) is created from information generated during the Remedial Investigation/Feasibility Study (RI/FS).

Release
When a hazardous substance goes from a controlled condition (for example, inside a truck, barrel, storage tank, or landfill) to an uncontrolled condition in the air, water, or land.

Remedial Action (RA)
The phases in Superfund site cleanup following the Remedial Design (RD) phase where the actual construction or implementation occurs. The RA is based on the specifications described in the Record of Decision (ROD).

Remedial Design (RD)
The phase in Superfund site cleanup where the technical specifications for cleanup remedies and technologies are designed. The RD is based on the specifications described in the Record of Decision (ROD).

Remedial Investigation/Feasibility Study (RI/FS)
Performed at the site after a site is listed on the National Priorities List (NPL). The RI serves as the mechanism for collecting data. The FS is the mechanism for the development, screening, and detailed evaluation of alternative remedial actions. The RI and FS are conducted concurrently; data collected in the RI influence the development of remedial alternatives in the FS, which in turn affect the data needs and scope of treat ability studies and additional field investigations.

Remedy
The method selected to clean up a Superfund site.

Removal Action
See short-term cleanup.

Residual Contamination
Amount of a pollutant remaining in the environment after a natural or technological process has taken place (e.g., the level of chemical remaining in soil after it has been treated).

Resource Conservation and Recovery Act (RCRA)
A federal law whose primary goals are to protect human health and the environment from the potential hazards of waste disposal, conserve energy and natural resources, reduce the amount of waste generated, and ensure that wastes are managed in an environmentally sound manner. Management of solid waste (e.g., garbage), hazardous waste, and underground storage tanks holding petroleum products or certain chemicals are regulated by RCRA.

Response Action
An action taken by EPA or another federal, state, or local agency to address the risks posed by the release or threatened release of hazardous substances--generally categorized as emergency response, short-term cleanup, and long-term cleanup.

Safe Drinking Water Act (SDWA)
A federal law that ensures that our tap water is fit to drink. Passed in 1974, SDWA sets national drinking water standards for public systems that deliver water to the tap. SDWA is used with the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) to protect and clean up groundwater by setting water quality standards.

Sampling
The collection of representative specimens analyzed to characterize site conditions.

Saturated Zone
The area below the water table where all open spaces are filled with water under pressure equal to or greater than that of the atmosphere.

Semi-Volatile Organic Compounds (SVOCs)
A group of chemicals composed primarily of carbon and hydrogen that have a tendency to evaporate (volatilize) into the air from water or soil. Some of the compounds that make up asphalt are examples of SVOCs.

Short-term Cleanup
A cleanup process that addresses immediate threats to public health and the environment that typically consist of less complex or less extensive contamination problems than those which require a long-term cleanup. There are three types of short-term cleanups: emergencies (e.g., fire or explosions), time-critical actions, and non-time-critical actions. Also referred to as removal actions.

Site Assessment
The process by which EPA determines whether a potential site should be placed on the National Priorities List (NPL); it can consist of a Preliminary Assessment (PA) or a combination of a PA and a Site Inspection (SI).

Site Inspection (SI)
A technical phase in Superfund site cleanup following the Preliminary Assessment (PA), during which EPA gathers information (including sampling data) from a site in order to use the Hazard Ranking System (HRS) to determine whether the site should be placed on the National Priorities List (NPL).

Source Reduction
The design, manufacture, or use of products that in some way reduces the amount of waste that must be disposed of; examples include reuse of by-products, reducing consumption, extending the useful life of a product, and minimizing materials going into production.

Spill Prevention, Control and Countermeasures (SPCC)
A plan that outlines how a facility will prevent oil spills, as well as how it plans to control and contain an oil spill to keep it from reaching surface water. Examples include: installing a secondary containment such as a dike, and making sure oil tanks are located within a fenced or locked area.

Superfund Amendments and Reauthorization Act (SARA)
Amended the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) on October 17, 1986. SARA reflected EPA's experience in administering the complex Superfund program during its first six years and made several important changes and additions to the program.

Superfund Trust Fund
A public trust fund created with passage of CERCLA in 1980 to be used to help pay for the cleanup of abandoned hazardous waste sites.

Surface Water
Bodies of water that form and remain above ground, such as lakes, ponds, rivers, streams, bays, and oceans.

Time-critical Removal Actions
A type of short-term cleanup in which, based on an evaluation of the site, EPA determines that less than six months is available before site activities must be initiated. During time-critical actions, EPA conducts an investigation of the contamination and produces an action memorandum authorizing and outlining the cleanup before beginning the actual cleanup.

Toxic
Poisonous.

Toxic Release Inventory (TRI)
EPA requires annual reports of toxic chemical releases to the environment. These reports are submitted on EPA Form R, the TRI Reporting Form. The reports are required to provide the public with information on the releases of listed toxic chemicals in their communities and to provide EPA with release information to assist the Agency in determining the need for future regulations.

Toxic Substances Control Act (TSCA)
A federal law, passed in 1976, that requires tests of chemicals that may harm human health or the environment; reviews of new chemical substances; limits on the availability of some existing chemicals; and import certification standards to ensure that imported chemicals comply with domestic rules. TSCA bars the introduction of chemicals that may pose unreasonable risks to people or the environment, when the risks outweigh possible economic and social benefits.

Toxicology
Study of the effects of poisons in living organisms.

Treatment Technologies
Processes applied to hazardous waste or contaminated materials, to permanently alter their condition through chemical, biological, or physical means, and reduce or eliminate their danger to people and the environment.

Underground Storage Tank (UST)
An underground tank storing hazardous substances or petroleum products. Under the Resource Conservation and Recovery Act (RCRA), Congress directed EPA to establish regulatory programs that would prevent, detect, and clean up releases from UST systems containing petroleum or hazardous substances.

Unsaturated Zone
The area above the water table where soil pores are not fully saturated, although some water may be present.

Volatile Organic Compounds (VOCs)
A group of chemicals composed primarily of carbon and hydrogen that have a tendency to evaporate (volatilize) into the air from water or soil. VOCs include substances that are contained in common solvents and cleaning fluids. Some VOCs are known to cause cancer.

Water Table
The top of the water-saturated portion of an aquifer.

Well
A bored, drilled, or driven shaft whose purpose is to reach underground water supplies.

www.epa.gov/ne/superfund
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